

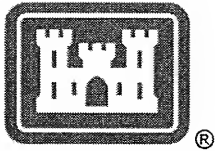
[REDACTED] NWO

From: Quinn, Kevin R NWO
Sent: Sunday, May 15, 2011 3:25 PM
To: cfong@nd.gov; [REDACTED] NWO; Farhat, Jody S NWD02; Thomas, Kimberly S NWO
Cc: Oldham, Margaret NWO
Subject: Riverwatch Daily #3 (UNCLASSIFIED)
Attachments: NR-RIVERWATCH5-11.No3docx.docx

Classification: UNCLASSIFIED
Caveats: NONE

Riverwatch Daily #3

Classification: UNCLASSIFIED
Caveats: NONE



U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

NEWS RELEASE

For Immediate Release: July 2, 2011

Contact: Kevin R. Quinn 402-995-2419

kevin.r.quinn@usace.army.mil

Jody Farhat 402-996-3840

Riverwatch Daily – Garrison and Oahe Dams

Update #3

OMAHA, Neb. – Due to high runoff from the far-above-normal plains and mountain snowmelt, the U.S. Army Corps of Engineers is evacuating large volumes of water from Garrison Dam in Riverdale, N.D. and Oahe Dam near Pierre, S.D.

In expectation of continued high runoff, the U.S. Army Corps of Engineers will release a daily bulletin detailing releases and levels for both dams. Below are the May 15, 2011 statistics for the two dams:

Daily Information Update

Garrison Dam and Lake Sakakawea:

- Midnight reservoir level – 1849.2 feet mean sea level
- Yesterday's Reservoir Inflow – 86,000 cubic feet per second (cfs)
- Current Reservoir Release – 48,000 cfs
- Annual Flood control and multiple use zone – El. 1,837.5 to 1,850 msl
- Exclusive flood control zone – El. 1,850-1,854 msl
- Top of spillway gates - 1,854 feet msl
- 6 a.m. River Stage at Bismarck-12.6 feet (Flood stage at Bismarck-16.0 feet)
- Planned scheduled releases
 - Monday, May 16: increase to 50,000 cfs at 8 am.
 - Tuesday, May 17 hold 50,000 cfs

Oahe Dam and Lake:

- Midnight reservoir level – 1616.9 feet msl
- Yesterday's Reservoir Inflow – 50,000 cfs
- Yesterday's Reservoir Release – 51,100 cfs
- 6 am river stage at Pierre 11.3 feet (Flood stage 15.0)
- Annual Flood control and multiple use zone – El. 1607.5 to 1617.0 feet msl
- Exclusive flood control zone – El. 1617.0 to 1620.0 feet msl
- Top of spillway gates: - 1620.0 feet msl
- Planned scheduled releases:
 - Hold 56,000 cfs through Monday
 - Actual releases may not equal scheduled releases because Oahe is being used to follow power loads.

Garrison Dam is a 210-foot high rolled earth embankment. Discharges are normally passed through five power tunnels having a combined discharge capacity of 41,000 cfs, and three flood tunnels having a combined discharge capacity of 98,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with 28 tainter gates and has a maximum discharge capacity of 660,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will go through the power plant and regulating tunnels.

(more)

[Type text]

Oahe Dam is a 245-foot high rolled earth embankment. Discharges are normally passed through seven power tunnels having a combined discharge capacity of 56,000 cfs, and six flood tunnels having a combined discharge capacity of 111,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with eight tainter gates and has a maximum discharge capacity of 80,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will be made through the power plant and outlet tunnels.

Daily bulletin updates are available from the Corps' website: <http://www.nwo.usace.army.mil/>

Northwestern Division's water management website for the most up to date information:
<http://www.nwd-mr.usace.army.mil/rcc/index.html>

U.S. Army Corps of Engineers Contact: Jody Farhat, Chief, Missouri River Basin Water Management 402-996-3840

###

Burke, Linda NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 10:50 PM
To: Farhat, Jody S NWD02
Subject: FW: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

FYI...

-----Original Message-----

From: Michael Gunsch [mailto:mgunsch@houstoneng.com]
Sent: Monday, May 16, 2011 10:40 PM
To: [REDACTED] NWO
Cc: gailen.narum@narumfamily.com; tfleck@attitudedr.com
Subject: RE: Garrison Releases (UNCLASSIFIED)

[REDACTED]

Thanks - The variation in releases at Bismarck have a component of downstream inflows, not all of which are measured. If there is an issue it is with the stage for a given flow - hence the need to monitor elevations during this steady flows and adjust. As I recall, however, the USGS has measured the flows recently too and they were within tolerance - at least in the graphing of it on the web site. I also understand the disagreement on measured flows and releases goes back a ways.

So far there have been a few issues along the river and I am sure others that are unreported. As the flows are above the Construction Reference Plane for the COE riprap projects I anticipate there will be some issues in many areas - we will have to wait and see. The duration of flows will increase stresses.

The older rating curve I have seen presents some variations and there is a window or envelope for given flows. Time to complete some comparatives also validation of the flood models seems to be warranted- or if nothing else and understanding of the variables and risks. If a Base Flood Elevation is established that has a range of elevations by six inches or a foot, then the powers that be need to be educated on that factor to consider in their ordinance. The City and County just increased the construction criteria from one foot to two feet above the BFE. Is this enough long term - a consideration.

A bit of rambling, appreciate the ear and updates.

Keep up the good work.

Michael H. Gunsch, PE, Principal / Project Manager

3712 Lockport Street
Bismarck, ND 58503
Phone (701) 323-0200
Cell (701) 527-2134
Fax (701) 323-0300
e-mail mgunsch@houstoneng.com

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From: [REDACTED] NWO [REDACTED]@usace.army.mil]
Sent: Monday, May 16, 2011 9:01 PM
To: Michael Gunsch
Cc: gailen.narum@narumfamily.com; tfleck@attitudedr.com
Subject: RE: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Michael,
I believe the combined discharges through the power plant and regulating tunnels is correct, although I'm not sure if we derated the flows through the power plant after we replaced the turbines? I'll have to check on that, as I don't believe we can run 41,000 cfs through the turbines anymore. The new ones are much more efficient.

There appears to be some discrepancies in the rating curve for the Bismarck gage. I discussed that with the NWS this morning. We are working that issue and are planning to have USGS take some flow measurements. We'll have to disseminate new information once the USGS can take a couple of readings...

-----Original Message-----

From: Michael Gunsch [mailto:mgunsch@houstoneng.com]
Sent: Monday, May 16, 2011 3:28 PM
To: [REDACTED] NWO
Cc: Gailen Narum (gailen.narum@narumfamily.com); Fleck Terry (tfleck@attitudedr.com)
Subject: Garrison Releases

Several questions have arisen regarding the daily report:

1. The capacity of the spillway is noted at 98,000 cfs (5 tunnels) and the power at 41,000 cfs.

Interesting as I was always of the understanding that the power was 40,000 cfs and the flood tubes were an additional 20,000 cfs for a total of 60,000 cfs? And certainly the total capacity is not $41+98 = 139K$ as someone might read this. Can you clarify - is the 98,000 cfs total with the power tunnels by passed or not generating? There is a need to know with questions being asked.

2. The USGS gage at Bismarck is indicating flows of over 55,200 cfs (today) and only 48,000 cfs is reported as inflows to Oahe. The inflows to Sak are high and falling, which is good, but the reporting at Oahe seems confusing and not in step with what

is being recorded. There is also 810 cfs from the Heart River and 692 cfs from the Cannonball that is not recorded at Bismarck so that makes the number even larger at Oahe - what is the scoop?

Any update you can provide would be appreciated ---

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Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 10:48 PM
To: Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED]
[REDACTED] NWO
Cc: [REDACTED] NWO
Subject: KFYZ Call (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,

I was able to listen to portions of KFYZ's broadcast today, where they had Bruce Engelhardt (from the State Water Commission) on the radio. Following Bruce's segment a few people called in with questions and/or comments that I wanted to make you aware of...

- One person called in and stated "the snowpack has been well over 125% of normal all winter long", so he wanted to know why the Corps did not increase releases sooner? I don't believe he had the correct snow-pack figures, but I suspect you will be asked this question. They may also ask why Garrison was not drawn down to 1837.5?

- Another person called and wanted to know "where are all the plovers nesting"? The host, Scott Backmeier, then made a comment about there not being any sandbars and commented that the Corps had cited people for using sandbars that had nests. I do not know if this is accurate? Garrison did not issue any citations that I recall. [REDACTED], can you verify whether we have cited anyone on sandbars due to birds nesting? Do we know if the USFWS cited anyone???

- A caller also called in and stated that a 13 foot stage on the Bismarck gage appears to be a significantly lower surface elevation than the 13 foot stage they saw in 2009 during the ice jam. I'm not sure if you want to explain this one, but during the ice jam we were in a back-water state, where 13 foot at the gage would have resulted in a higher stage closer to the ice jam downstream. We essentially had a "pool" condition verses a free flowing river stage. I know there are still several questions about whether the rating curve at the Bismarck gage is accurate. I guess the answer to that would be that we are planning to obtain new measurements and data during these high flows.

- FYI, several people had called in last week and complained about the goose nests that were being flooded on the river. I know one person watched a goose sit on her nest until she was floated off it by the river and the eggs were washed away. The NDG&F responded to these concerns by stating there was nothing that could be done for the geese. Currently, there is a very healthy Canada goose population so it's not going to dramatically affect their numbers, although there will likely be a smaller localized population on the river this year.

- I've has some calls about our previous peak releases. Here's what I've conveyed, based on our historical data:

- Maximum releases from Garrison were 65,200 cfs in July of 1975, with a daily average of 61,800 cfs for that month.

- Maximum releases from Garrison in 1997 was 59,100 cfs with an average of 57,300 cfs for that month.

I suspect there will be other questions that come up, but imagine you've heard most of them during your AOP meetings. I have been playing phone tag with Mr. Bachmeier so do not know when he'll have me on the show, but if you want to defer project specific questions until then, that would be fine...

[REDACTED]
[REDACTED]
[REDACTED]
Operations Project Manager
Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 10:25 AM
To: [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED]
[REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: KFYZ Call (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Thanks Todd/Greg,

Carol Aron talked to Rick Grosz and he has not issued any citations or written warnings in ND, to date. He does keep a record of individuals he has talked to for future reference. As I understand it Brad Merrill, the special agent in SD has issued citations along the SD/NE border on some of the sandbars the Corps has created. Hope that helps clarify...thanks.

-----Original Message-----

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 7:56 AM
To: [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO
Subject: RE: KFYZ Call (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

Hi All,

In response to [REDACTED] inquiry about the Corps citing people for using sandbars that have nesting piping plovers and least terns, we have not issued any citations. The primary reason is that we do not have authority to issue citations off of project lands. Our only authority below Garrison Dam would be below RM 1304, which is the northernmost boundary of the Oahe Project. Our personnel are instructed if they observe a violation, to get as much information as possible and contact either the US Fish & Wildlife Service special agent in Bismarck, Rich Grosz, or to contact the nearest ND Game & Fish Department conservation officer. We do put up restriction signs on sandbars notifying the public of the nesting birds and that access to the sandbars is not allowed. This done under a sovereign lands permit issued by the ND Water Commission. In 2010 restriction signs were placed at twelve sites, primarily in the areas of Stanton, Washburn and above and below Bismarck/Mandan. In 2010 crews found 160 piping plover and 109 least tern nests on the Missouri below Garrison Dam. Of these, two plover and zero nests were lost to human disturbance.

[REDACTED] did several patrols on the river last year during the nesting season and made contact with the public. I do not believe that he issued any citations last year. You can double check with [REDACTED]; [REDACTED] has his phone number.

We are expecting very little use by the terns and plovers below Garrison Dam this year due to most of the sandbars being inundated by the high releases. I would expect that the plovers will try and find nesting sites on the alkali wetlands, but I understand that water levels are high there too.

If you have any other questions, please e-mail or call me.

-----Original Message-----

From: [REDACTED] NWO

Sent: Monday, May 16, 2011 10:48 PM

To: Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO

Cc: [REDACTED] NWO

Subject: KFYZ Call (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

Jody,

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[REDACTED]
[REDACTED]
Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 8:43 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO
Subject: FW: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

All,
Reference the questions below regarding our current "River Watch" bulletin. I believe the answer to the first question is as follows:
-Yes the cfs through the power plant and the regulating tunnels are additive, i.e. we could discharge 139,000 cfs with the plant and regulating tunnels at full capacity. Is this correct?
- I'm also wondering if the figure for capacity through the power plant is correct? We say it's 41,000 cfs in River Watch, but it's listed at 38,000 cfs in the Summary of Engineering Data. Has this been updated based on the new turbines?

- Regarding the second question about discharges from Garrison, plus contributions from the tributaries not equaling what the river gage at Bismarck is showing, or the inflows into Oahe, is confusing. Per conversation with [REDACTED] this morning, he too feels like the flows for the gage at Bismarck are too high. I believe he was going to have USGS take a measurement on this?

Please verify the combined discharges through the powerplant and regulating tunnels. If you have any additional information regarding the river gage flows at Bismarck, that too would be much appreciated.

[REDACTED]
-----Original Message-----

From: Michael Gunsch [<mailto:mgunsch@houstoneng.com>]
Sent: Monday, May 16, 2011 3:28 PM
To: [REDACTED] NWO
Cc: Gailen Narum (gailen.narum@narumfamily.com); Fleck Terry (tfleck@attitudedr.com)
Subject: Garrison Releases

[REDACTED]
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Any update you can provide would be appreciated ---

Michael H. Gunsch, PE, Principal / Project Manager

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Thematic Questions/Comments	Responses
Determination	
<p>Q. Why did it take so long to come to this decision, since we are currently experiencing high volumes of water in the basin?</p>	<p>This is considered a federal action and requires that we comply with the National Environmental Policy Act, therefore an Environmental Assessment needed to be completed. In addition, to be able to enter into surplus water contracts the Corps regulations require that a letter report, or in this case a surplus water report, be prepared and used as a basis for determining whether surplus water exists, the amount of surplus that should be made available and a policy-based price for that water. Both items needed to be complete before a decision could be made.</p>
<p>Q. Why require the Corps to do rulemaking on surplus water agreements?</p>	<p>The ASA(CW) would like to have a pricing policy that is reasonable and fair to all surplus water users and she does not believe that the existing pricing methodology meets that standard. The rulemaking process will be open and deliberative, allowing for meaningful public and stakeholder participation.</p>
<p>Q. The Surplus Water pricing policy is antiquated, not fair and unreasonable.</p>	<p>The ASA(CW) agrees with this sentiment and therefore has declined to establish an interim pricing policy for surplus water under the Section 6 authority and instead directed the Corps to immediately conduct and involve the public in notice and comment rulemaking to establish a nation-wide pricing policy for surplus water—one that is fair and reasonable for surplus water pricing decisions.</p> <ul style="list-style-type: none"> • The updated pricing methodology would be developed by the Corps, and then be coordinated and implemented through the administrative law rulemaking process that executive agencies follow to announce formal rules. • The administrative law rulemaking process includes (1) informing the public before the rule takes effect; (2) allowing public comment and agency response to those comments; and (3) creation of a permanent record of the agency's analysis and process in developing the rule. • She has required that this be completed within one year. <p>It will be a nationwide policy.</p>
<p>Q. Will the rulemaking decision apply to Missouri River basin reservoirs only, or will that policy decision become national policy for all Corps reservoirs?</p>	
<p>Q. How did the Corps determine that there was surplus water?</p>	<p>In the report the Corps based the definition of surplus water under Section 6 of the Flood Control Act of 1944 and associated regulations. Using the definition the Corps determined that there was surplus water under two conditions. First there was a project purpose that had not developed as anticipated, specifically irrigation usage in the basin has not yet fully used the amount of water Congress authorized, therefore for this temporary period the Corps is designating a portion of this un-used irrigation water as surplus. Secondly the amount of sedimentation at Lake Sakakawea is less than anticipated, therefore the Corps is designating a portion of the difference as temporarily surplus.</p>
<p>Q. How do you answer the statement that you have put a moratorium on use of water from Lake Sakakawea?</p>	<p>We are not restricting access to the lake. We are prepared to process surplus water contracts and provide the associated easements to those that have complete application packages.</p>

Thematic Questions/Comments	Responses
<p>Q. How will new requests for water be handled?</p>	<p>For all new M&I uses of surplus water (those requesting to use surplus water for the first time, or those seeking to increase their current use), the Corps will proceed to enter into surplus water contracts that provide for the recovery of the operation and maintenance (O&M) costs associated with this use at Lake Sakakawea.</p> <ul style="list-style-type: none"> • The Corps has determined that the current annual O&M expenses at Lake Sakakawea are \$.68 per acre-foot of water requested. • This will allow the government to recoup the expenses it incurs in entering into a contract and is based on costs incurred by the government in accommodating the request. • It is not a charge for the resale of water rights held by another party, or a charge for storage in a Corps reservoir. • The term of these surplus water agreements and any supporting easements, however, shall be for a period not to exceed the time to complete the notice and comment rulemaking. • Surplus water agreements after that date shall be priced in accordance with the new pricing policy established via rulemaking.
<p>Q. How will existing users be handled?</p>	<p>The Corps has been directed to immediately notify all other, existing M&I users of surplus water that they will be required to enter into surplus water contracts, and easements will be renegotiated, in accordance with the new pricing policy for surplus water, once that policy is established via rulemaking.</p> <ul style="list-style-type: none"> • The ASA(CW) is allowing for a transitional period of up to one year, during which time existing M&I users of surplus water may continue to make withdrawals without charge. • After the transitional period, however, all M&I users of surplus water shall be required to pay for that use in accordance with the new pricing policy established via rulemaking. • Any easements expiring before the final rule is published will be extended only for a period not to exceed the time to conclude the rulemaking.
<p>Q. How will this policy impact infrastructure in the State of North Dakota?</p>	<p>The EA concluded that by providing water out of Lake Sakakawea could provide some positive infrastructure benefits. One example is a possible reduction in truck traffic on the state, county and rural roads.</p>
<p>Q. How will the policy impact farmers and ranchers?</p>	<p>Since the Corps lacks the authority to contract and charge for irrigation use, it is anticipated that there will be no impacts to farmers and ranchers.</p>
<p>Q. Will the public comments be made available? Why or why not?</p>	<p>The public comments received during the public comment period are included in Appendix B, Volume II of the final Garrison Dam/Lake Sakakawea Surplus Water Report. The report is now available on our Internet Web site: www.nwo.usace.army.mil.</p>
<p>Q. With the flood damage prevention index projected to be over \$40 billion this year and since 1967 the six dams having generated more than \$3 billion in electricity revenue, why are you trying to charge for water?</p>	

Thematic Questions/Comments	Responses
Hydropower	
1. There are positive benefits to hydropower, this is illogical.	<u>Response:</u> One would expect minor reductions in one or more years, but a "major" change in Garrison releases caused a redistribution in releases in 1980, resulting in an increase in benefits (not expected for such a small change in depletions).
2. The Corps did not consult with Western Area Power Authority (WAPA).	<u>Response:</u> WAPA was coordinated with on a technical basis and we requested their views on the Federal action per a letter sent December 17 th . Western's comments were received and addressed in this document.
3. The model used inaccurately reflects the real costs to federal hydropower customers.	<u>Response:</u> The Daily Routing Model and associated economic modules are used by the Corps for the Missouri River mainstem system, and is the best available model to calculate hydropower impacts given the scope of the study.
4. There is an inadequate reflection of the cost to hydropower customers of 100,000 AF depletion.	<u>Response:</u> The hydropower impacts have been calculated on a system-wide basis but are small because of the relatively insignificant amount of water resulting from the proposed Federal action (527 ac-ft) that would not be available to generate hydropower. Revenues for hydropower are a function of water availability and this can fluctuate widely from year to year (up or down) but payments to Treasury are constant.
5. There are concerns with the revenue foregone methodology used in the Report.	<u>Response:</u> The Corps determined that the true loss of generating capability is 527 ac-ft as opposed to 100,000 ac-ft per year over the 10 year period. This relatively small amount of difference is the result of users, without the Federal action, continuing to meet their water needs from the free flowing stretches, tributaries, or existing intakes on the Missouri River. It should also be noted that because other authorized purposes like irrigation have not developed as intended, additional water has been available and used by the hydropower purpose without a corresponding increase in revenues to the Federal Treasury.
6. This is a concern that 257,000 acre/feet will never pass through hydro generators, thus losing hydropower benefits.	<u>Response:</u> 257,000 acre-feet is the amount of storage required to yield 100,000 acre-feet of water. The calculated storage is utilized for pricing purposes only, while the yield is what would pass through the generators. Our analysis shows that 527 acre-feet is the yield lost due to the proposed Federal action.
7. The updated cost of storage calculation does not include benefits of Ft. Peck.	<u>Response:</u> The calculation for updated cost of storage could be calculated on a system wide basis based on system-wide capacity and the system-wide joint updated costs. The Corps determined this would not result in a significantly different cost. Therefore the Corps would not add costs from Fort Peck directly to Garrison. It should also be noted that the 1944 Surplus Act allows the Secretary to set the price for the use of the water as she "deems reasonable". This allows the Secretary latitude in the methodology used to set the price.
8. How will cost allocations be shifted to reflect impacts to Hydropower?	<u>Response:</u> Because the water is surplus and not adversely impacting the authorized purposes including hydropower, it will not be used to offset hydropower reimbursement obligations. It should also be noted that because other authorized purposes like irrigation have not developed as intended, additional water has been available and used by the hydropower purpose without a corresponding increase in revenues to the Federal Treasury.
9. Bureau of Reclamation (Reclamation) facilities should have been included in the impact assessment, especially regarding potential impacts to hydropower.	<u>Response:</u> To the extent that data was available we collected Reclamation usage. Information on tribal intakes constructed under Reclamation authorities were also collected and considered. Specifically authorized Bureau of Reclamation projects do not require contracts with the Corps for surplus water, therefore the document has been revised to remove all the BOR facilities from the demand analysis.
10. The Report should have included a complete listing of all M&I contracts.	<u>Response:</u> The Corps has only one existing M&I contract. This contract is with Basin Electric and is mentioned in the report, but is not included in the demand analysis.
Contracts/Cost/Pricing	

Thematic Questions/Comments	Responses
<p>Q. Why didn't the Corps put repayment contracts for water into place at the start of the construction of the reservoir?</p>	<p>Policy and practice has changed since the dams were constructed. The Corps has followed each policy that has been in place since the construction of the dam. Currently we are now required to have a contract in place prior to an easement being granted. The Real Estate Policy Guidance Memorandum issued in December 2008 is the policy we are now following.</p>
<p>Q. If it is policy that is requiring this contract and charge, then why don't you change the policy?</p>	<p>While policy brought this practice to light, it is really the law that requires the Corps to enter into contracts and charge a reasonable price. Changing the policy would not change the legal requirement.</p>
<p>Q. For the surplus water contracts, is the Army charging for the water, the use of water or the storage of water?</p>	<p>The Army recognizes that the rights to allocate waters are for the most part governed by State and Tribal law. However, Section 6 of the 1944 FCA requires that the Secretary of the Army impose a reasonable charge for making available surplus water at one of its reservoir projects. A charge based on costs incurred by the Government in accommodating the request in making water which is stored in one of its reservoirs available is not a charge based on the value of water or the use of the water, but is reflective of the costs the Corps incurs while entering into contracts. Thus, we believe this is a reasonable basis to meet the Army's obligation under Section 6 to determine a reasonable cost for providing such water.</p>
<p>Q. Why is the Corps requiring applicants to enter into a contract and pay a charge for surplus water withdrawn from Lake Sakakawea?</p>	<p>Section 6 of the 1944 FCA sets forth conditions which the Secretary of the Army must comply with when approving the use of surplus water at any Corps reservoir. These conditions include a requirement that the user enter into a contract and pay a charge that the Secretary deems reasonable. Under the statute these conditions are not waivable.</p>
<p>Q. How can you make M&I users pay and not irrigation users?</p>	<p>The authority that the Corps has been given by Congress to provide surplus water for M&I use requires that a contract be entered into and prices assessed on terms that are "deemed reasonable". The Corps' authority to contract for irrigation is very limited and does not apply to any of the mainstem projects, so the Corps is unable to contract or require reimbursement for irrigation use.</p>
<p>Q. Will water users at the other Missouri River main stem reservoirs be required to pay for accessing water from their reservoirs?</p>	<p>The ASA(CW) will make a determination based on the administrative record provided for each of the mainstem reservoirs. The law requires a contract and a reasonable charge to enter into such a contract. Lake Sakakawea was the first report to be published, but the Corps is currently developing surplus water supply reports for the other five mainstem projects. The remainder of the reports will be made available for public review and comment when drafts are completed.</p>
<p>Q. Why are Bureau of Reclamation authorized projects not required to enter into contracts and pay for water they are withdrawing from mainstem projects?</p>	<p>The Bureau of Reclamation (BoR) has been authorized by Congress to undertake projects utilizing water from the mainstem system. Thus, those projects undertaken by the BOR withdrawing water from Lake Sakakawea were authorized by Congress in specific legislation and therefore the water withdrawal had been specifically approved by Congress. Since these projects have been authorized by Congress, the Corps has concurred with the BoR assessment that a surplus water agreement or water storage agreement would not be needed. However, it should be recognized that the BOR does require users of their system to repay the cost of facilities constructed by the Bureau in making this water available.</p>

Thematic Questions/Comments	Responses
<p>Q. The State says they should not be charged, yet you are charging for surplus water. What is the Corps response to that?</p>	<p>The law requires that the Corps enter into a contract and charge a reasonable price. The ASA(CW) has determined that it is reasonable to expect new users to pay a portion of the O&M expenses which allows the Government to recoup the expenses it incurs in accommodating the request. In the case of Lake Sakakawea this cost is \$0.68 per acre-foot of water (yield) requested.</p>
<p>11. Limits to repayment in the 1944 Flood Control Act (as amended in 1958).</p>	<p><u>Response:</u> This language (1958 Water Supply Act) limits the repayment period to a term that cannot exceed 50 years "after the project is first used for the storage of water for water supply purposes" not after construction is complete.</p>
<p>12. In the Report the fee structure for pricing is unfounded.</p>	<p><u>Response:</u> The Corps surplus water supply pricing is based on established policy found in ER 1105-2-100 and the water supply handbook.</p>
<p>13. The Dakota Water Resources Act of 2000 exempts the state from water payment provisions.</p>	<p><u>Response:</u> The Dakota Water Resources Act applies to Municipal, Rural, and Industrial (MR&I) projects constructed under the Bureau of Reclamation's authorities and dictates how the BOR should charge users who withdraw from BOR projects. It does not apply to the Corps' obligation to charge for the withdrawal of water directly from Corps reservoirs. Upon completion, the report and recommendations will be forwarded to the Assistant Secretary of the Army for Civil Works, where the issue of price will be addressed per her discretion.</p>
<p>14. The Corps needs to equitably spread costs to all benefactors in the whole basin.</p>	<p><u>Response:</u> The Omaha District will conduct water supply reports at each of the other reservoirs throughout the Missouri River basin. Because of the demand for access to the water in North Dakota, Lake Sakakawea was the first to undergo the study. The timeline for the additional studies is being determined.</p>
	<p>With regard to downstream users, the Corps doesn't charge downstream flood control beneficiaries (which include many ND communities). Unlike M&I water supply, which is considered a local or state responsibility, the Corps is responsible for providing flood control and navigation projects in line with Federal legislation and policy. The cost share at the time of construction of the Mainstem Missouri River System is set by statute. In the case of the main stem dams, downstream communities or navigators were not charged directly for the construction of the dams. Flood risk management benefits are considered benefits to the nation, and these benefits are calculated on an annual basis. Regarding navigation the Corps of Engineers is responsible for maintaining inland navigation waterways. Commercial operators on these designated waterways pay a fuel tax, deposited in the Inland Waterways Trust Fund, which funds half the cost of new and rehab of existing inland waterways infrastructure. Hydropower does make payments to the federal government for benefits that come from the Missouri River projects, and all receipts go to the U.S. treasury.</p>
<p>15. The analysis should not include costs for power intake works, levees and floodwalls, and multiple reservoirs.</p>	<p><u>Response:</u> The Corps charge for the use of surplus water is based on an appropriate proportion of project joint costs. Joint costs are the costs of features of the project that serve multiple authorized purposes. Cost which can be attributed to a specific purpose, such as hydropower (power intakes) or flood risk management (levees and floodwalls) are not included. The Corps surplus water supply pricing is based on established policy found in ER 1105-2-100 and the water supply handbook.</p>
<p>16. The oil and gas industry should pay for use of water.</p>	<p><u>Response:</u> Upon completion, the report and recommendations will be forwarded to the Assistant Secretary of the Army for Civil Works, where the issue of price will be addressed per her discretion.</p>
<p>17. Tribes Section 6 authority to enter into agreements for surplus water does not include Tribes.</p>	<p><u>Response:</u> The Report does not cover Bureau of Reclamation intakes, including those that have been authorized for the Tribes. To date, the Corps has not required surplus water agreements for such withdrawals, nor is it anticipated that such agreements will be required in the future for similar Bureau intakes.</p>
<p>18. The Corps' charge is less than Reclamation's.</p>	<p><u>Response:</u> The charge is consistent with ER 1105-2-100.</p>

Thematic Questions/Comments		Responses
<p>19. Dakota Water Resources Act of 2000 (DWRA 2000) prohibits charging users for the cost of the construction of the Corps reservoirs.</p>		<p>Response: The DWRA 2000 governs the price charged by Reclamation for users from Reclamation projects. It does not limit the Corps' authority to charge for withdrawals made directly from a Corps reservoir in North Dakota.</p>
Water Rights		
<p>Q. How does the determination of 100,000 a.f. of surplus water in Lake Sakakawea impact the Tribal reserved water rights under the Winters Doctrine?</p>		<p>The Winters Doctrine refers to a ruling by the U.S. Supreme Court that held that the creation of a reservation includes an implied reservation of water rights in sources within or bordering the reservation. The Corps acknowledges this doctrine, but based on the Surplus Water Report, does not believe that the decision to quantify a relatively small quantity of surplus water at Lake Sakakawea will affect those rights.</p>
<p>20. North Dakota and the Tribes have rights to the natural flow of the Missouri River in North Dakota and river flows in Lake Sakakawea should not be considered stored water.</p>		<p>Response: The Corps acknowledges that Tribes have water rights under the Winters Doctrine. Section 6 has no effect on such rights. Nor does it affect any allocation of rights in water by the appropriate Tribal or State jurisdictions. Corps policy recognizes that acquisition of water rights is the responsibility of the users entering into agreements with the Corps, and that the Corps will not become involved in conflicts concerning those rights. Section 6 merely provides a mechanism for the Government to contract for the use of surplus water from Corps reservoirs with domestic and industrial users who have obtained the appropriate water rights. The Report identifies surplus water and calculates the policy price for its use.</p>
<p>21. Charging Tribes for water violates the United States trust responsibilities to Tribal nations and ignores tribal water rights. Tribal water rights in Lake Sakakawea under Winters Doctrine should be acknowledged and that whenever they are adjudicated, it would influence future determinations of storage and surplus water.</p>		<p>Response: The Corps acknowledges that Tribes have water rights under the Winters Doctrine, and has determined that Section 6 does not abrogate those rights. The Report identifies surplus water and calculates the policy price for its use. The Corps is not charging for water, but rather for the right to use surplus water as Section 6 allows.</p>
<p>22. There is a concern that temporary use could become permanent and affect availability of water for downstream states.</p>		<p>Response: This report addresses temporary use of surplus water and is limited in scope and duration. Contracts for surplus water agreements are normally only for five years, with an option for a five year extension. The long term use of water is outside of the scope of this study, but the development of a comprehensive, long term strategy is proposed in the Report.</p>
Irrigation		
<p>23. Does Section 6 surplus water authority apply to irrigators?</p>		<p>Response: The Section 6 authority is for municipal and industrial users only. The Corps lacks authority to contract for the use of surplus water for irrigation.</p>

Thematic Questions/Comments	Responses
Q. How will irrigation, both new applicants and existing users, be handled?	<p>The requirement to enter into a water contract is not applicable to irrigation uses.</p> <ul style="list-style-type: none"> While easements are still required for the use of land at a Corps project for the purpose of withdrawing water for irrigation, the Corps will not require a separate contract for such irrigation withdrawals because the Corps currently lacks authority to execute such contracts. The Corps will not prevent existing irrigation users, with easements and valid water rights, from continuing to withdraw water from Lake Sakakawea for irrigation, and will allow new easements for irrigation users with valid water rights to withdraw water for irrigation use upon successful completion of the easement application process. This use will be subject to the overall 100,000 acre-foot limit until the question of the authorization for irrigation withdrawals from Lake Sakakawea is resolved.
Q. Long-Term what will you do about irrigation from the mainstem system?	<p>The Corps has been directed to work with the Bureau of Reclamation, the Administration, and Congress to resolve, through legislation, the questions of federal agency jurisdiction over irrigation water withdrawals from the Corps' Missouri River main stem reservoirs, and the terms for such withdrawals.</p>
Q. I like not being charged for use of irrigation water, why pursue a way to charge me?	<p>Existing irrigation use reflects lawful state water rights, and is consistent with the overall purpose of main stem system. However, both the Corps and the Bureau currently lack specific authority to affirmatively provide for irrigation use from Lake Sakakawea and the Corps' other Missouri River main stem projects in a manner that is consistent nationwide with other BOR and Corps projects and would help repay the federal investment. Therefore the Corps will be working with the Bureau of Reclamation, the Administration and Congress on appropriate legislation to address the issue of irrigation withdrawals from main stem reservoirs, not associated with any existing Bureau diversion project.</p>
M&I Water Supply	
Q. The Corps has Section 6 authority to charge M&I users, but that authority is not an obligation. Why has the Corps decided to exercise that authority now?	<p>It is the only authority that would allow access to the water for M&I uses, since Lake Sakakawea does not have a specific allocation for M&I water supply. Without an authority, the Corps is not able to allow the use of water for M&I purposes.</p>
24. Water Supply is not the Corps' mission, and they should stay out of the business of water supply.	<p><u>Response:</u> Water Supply is an authorized project purpose of the Missouri River Projects. While water supply is primarily the responsibility of States and local governments, the Corps is authorized to participate and cooperate with local entities in developing such water supplies in connection with the construction and operation of Federal projects.</p>
25. The Corps of Engineers is inappropriately applying its section 6 authorities to permanent uses.	<p><u>Response:</u> Section 6 gives the ASA(CW) broad authority to contract for the use of surplus water. It is within her discretion to offer short term contracts for existing users while USACE is determining how to deal with such permanent users provided that the contracts for such water will not adversely affect the existing lawful uses of such water.</p>
26. The Corps has stated that there is no storage currently allocated in Lake Sakakawea for municipal and industrial water use. As such, the past practice of issuing easements for water withdrawals from Lake Sakakawea appears unlawful.	<p><u>Response:</u> The easements were issued according to the guidance at the time.</p>
27. Sediment storage would be in the permanent pool, not the carryover multiple-use zone.	<p><u>Response:</u> The document was revised to designate surplus from sediment storage in the permanent pool rather than the carry over multiple use zone.</p>

Thematic Questions/Comments	Responses
<p>28. How will pricing affect oil and gas industry's demand for water?</p>	<p><u>Response:</u> To the extent this applies to the use of water by the oil and gas industry, the Report concludes there would be no effect. The EA makes a logical argument as to why oil and gas industry will not be affected by this federal decision, including that water is currently readily available to the industry (without a Corps action), and that there are other economic factors (such as supply of people and rigs, and the price of oil) upon which the industry is dependent. The fact that the industry is currently rapidly expanding in North Dakota is further evidence that these factors are the driving force of the industry... not the Corps decision to allow the temporary use of surplus water. The EA was updated to include a better description as to why this is the case (see Section 5.1.3 Scope of Analysis).</p>
<p>29. Section 6 does not authorize the reallocation of storage space in a Corps Reservoir.</p>	<p><u>Response:</u> The Corps is not reallocating storage space in the reservoirs. Although there were no specific amounts of storage allocated to any of the purposes originally, water supply is an authorized purpose of the project. Accordingly, the Secretary of the Army is authorized by law to enter into agreements with non-Federal entities for municipal and industrial (M&I) water supply storage in Lake Sakakawea. In this case, the Corps of Engineers is recommending to allow temporary use of surplus water under the authority of Section 6 of the Flood Control Act of 1944 (FCA). The surplus water report states and provides support for a determination of surplus water availability, the quantity of the surplus water and a cost for the water storage. The process used to quantify and determine the appropriate cost is provided in the Institute of Water Resources Water Supply Handbook, dated December 1998. There is no determination of temporary allocations of storage space mentioned in the report.</p> <p>During the term of the temporary use of surplus water, the Corps of Engineers plans to develop a more comprehensive strategy to address long term regional water needs be developed that may involve the administration, congress, and stakeholders.</p>
<p>30. It is inappropriate to include Reclamation projects within the demand.</p>	<p><u>Response:</u> The document has been revised to remove all the BOR facilities from the demand analysis.</p>
<p>31. The Corps failed to account for existing and future municipal and industrial uses.</p>	<p><u>Response:</u> The exact quantities of water being withdrawn through easements on Lake Sakakawea are difficult to determine from the available data. The Corps keeps records on easement allocations, but does not collect data on actual water usage. The North Dakota State Water Commission does keep detailed data on permitted water usage, and all Corps easements also require the recipient to possess a valid state or Tribal water right. There is no data set that allows direct correlation of State water use permits with Corps easements, therefore the analysis was based on usage under State permits within 1 mile of Lake Sakakawea. This information was determined to be the best available information.</p>
<p>32. There is no sponsor identified.</p>	<p><u>Response:</u> No sponsor is required under Section 6.</p>
<p>33. The estimates for water use by the oil and gas industry appear arbitrary or unfounded.</p>	<p><u>Response:</u> The estimate for new oil and gas wells (projected between 1,500 and 1,800 new wells per year) is based on information provided by the North Dakota Industrial Commission. Estimates on water requirements of each well were provided by the state and the industry.</p>
<p>34. The report fails to account for tribal water use and future water demand.</p>	<p><u>Response:</u> Most if not all tribal intakes are part of a specifically authorized Bureau of Reclamation project and as such do not require contracts with the Corps for surplus water. Therefore they are not included in the demand analysis.</p>
<p>35. Will the development of this policy interrupt existing users?</p>	<p><u>Response:</u> The Corps does not expect that this will interrupt existing users, although they may have to enter into a surplus water contract.</p>
<p>36. How do existing water users in Lake Sakakawea use their water, and how do the current users plan to utilize their water in the future.</p>	<p><u>Response:</u> The total quantity of water being withdrawn through the 142 water intake easements (i.e., annual usage) is estimated to be approximately 33,000 acre-feet per year based on best available data. The majority of existing use is attributed to M&I and power (94%) with the remaining 5% and 1% attributed to irrigation (excluding irrigation through Reclamation facilities) and rural water respectively. Future demand by existing easement holders requiring renewal is predicted in the report to be approximately 26,000.</p>

Thematic Questions/Comments	Responses
<p>37. Corps out grant guidance dated March 30, 2009 excludes easements from charging for oil, gas or mineral exploration or extraction.</p>	<p><u>Response:</u> This policy applies to real estate easements and not surplus water agreements.</p>
<p>38. The Corps needs to coordinate with Reclamation and Western.</p>	<p><u>Response:</u> The Corps recognizes the importance and commits to close communication with the Bureau and Western Area Power with regard to any planning efforts on the Missouri River.</p>
<p>39. The Report states that irrigation diversions come from both the permanent pool and the carryover multiple use zones.</p>	<p><u>Response:</u> The report has been modified to indicate that irrigation storage is from the carry-over multiple-use zone.</p>
<p>40. Need to plan for the full quantity allocated to irrigation.</p>	<p><u>Response:</u> The Corps recognizes the full quantity that has been allocated to irrigation. The Corps also recognizes that irrigation has not developed as anticipated. The Corps has determined in this Surplus Water Report that a temporary use of up to 100,000 ac-ft of water for water supply will not significantly affect irrigation.</p>
<p>41. Should have simulated Lake Sakakawea operations and demands individually rather than as a system.</p>	<p><u>Response:</u> The Missouri River mainstem reservoirs are operated as a system. Therefore, it is appropriate to determine the yield and storage requirements as a system, not individually.</p>
Cultural	
<p>42. The Corps failed to properly consult under Section 106 of the National Historic Preservation Act.</p>	<p><u>Response:</u> In August 2010, the Corps of Engineers formally notified Tribes of their intent to undertake the surplus water study. Notification went out to Omaha District State Historic Preservation Offices (SHPO) and Tribes listed in Section 10.1 of the EA. On 19 November 2010 the Corps sent a representative to the Semi-Annual Meeting for the Programmatic Agreement for Operation and Management of the Missouri River Main Stem System (PA) to describe the action and answer any questions. On 17 December 2010 the Corps of Engineers formally notified SHPOs and Tribes of the availability of the draft surplus water report and EA and requested review and comment.</p> <p>Concerning the Federal undertaking of removing 527 ac-ft of water from Lake Sakakawea, the Study indicates that the depletion of 527 ac-ft of water would have no measurable effect on the reservoir levels at Lake Sakakawea and the other Main Stem reservoirs and, therefore, no effect on cultural or historic properties on or near the shoreline. It is our understanding that consultation would only be required if there were going to be an effect cultural or historic properties, therefore the District has determined it is in compliance with Section 106 of the NHPA for the removal of 527 ac-ft from the reservoir.</p> <p>The Surplus Water Report Draft Environmental Assessment Chapter 8 page 122, NHPA, states "Discussions between the Corps and the North Dakota SHPO are ongoing and final coordination with regard to this law would be completed before construction." On 8 February 2011 the Corps formally notified SHPOs and Tribes of the proposed easement intakes applications and requested comments and concerns. Detailed intake easement application information was provided to SHPOs and Tribes (PA points of contact). Comments are due March 11, 2011.</p>
<p>43. There was a failure to address cultural resource concerns properly.</p>	<p><u>Response:</u> Routes for the seven (7) proposed intakes have been initially designed to avoid impacts to the environment and cultural and/or Traditional Cultural Properties (TCP) but their design is still preliminary. As the plans for the proposed intakes become more final, further coordination with Tribal, State, of Federal agencies will be completed as appropriate.</p>
<p>44. No cultural resource inventories of the proposed intakes and their associated infrastructure were completed.</p>	<p><u>Response:</u> All Traditional Cultural Properties (TCPs) have been identified by Corps' sponsored Tribal TCP inventories including most recently, "Draft, A Traditional Cultural Property Study Lake Sakakawea, North Dakota"; Contract W9128F-04-P-0161 Authors: Elgin Crows Breast and Calvin Grinnell May 2007.</p>

Thematic Questions/Comments	Responses
<p>45. District Engineer is not qualified to allow a project to proceed should a cultural site be found in the field.</p>	<p>Response: The district does not claim that the DE can allow a project to continue should a site be found, but the DE has the authority direct all construction to cease until determinations can be made. The determination to continue construction would be made by the District Engineer upon coordination with appropriate authorities.</p>
Tribal Consultation	
<p>46. The Corps must comply with the legal requirements for government to government consultation with the MHA nation prior to issuing a recommendation and final report on this project.</p>	<p>Response: The Corps understands that consultation is a process and not an event, and considers that it has begun the consultation process. Information has been shared with the Tribe throughout the process and the Corps met with the Tribe, at their request on October 28 2010. Repeated attempts have been made during and after the public comment period to reach the Chairman, with the intent to set up another meeting. The Corps will be willing to continue discussions, should the Tribe desire it. Note: An acceptable date has been agreed upon between the Corps and the MHA nation and a government to government consultation meeting is currently scheduled for 28 March 2011.</p>
<p>Q. Why wasn't the Tribe consulted on the RE policy guidance memorandum?</p> <p>NEPA</p>	<p>Implementation of the policy was completed through Corps headquarters and followed all applicable requirements in the establishment of the policy.</p>
<p>Q. Does the decision and report consider or address the environmental and human health concern possibly associated with hydro-fracturing and the contamination of groundwater and/or air quality? To what extent?</p>	<p>No. The purpose of the report is to determine if there is surplus water available, quantify the amount that would be available for this action and provide a policy price for the use of the surplus water. The Environmental Assessment focuses on the withdrawal of 100,000 acre-feet of water to support all M&I uses, and assesses impacts. As is presently the case, the hydro-fracturing for oil-and-gas development will occur regardless of whether the Army approves the use of surplus water from the main stem projects.</p>
<p>Q. You keep approving incremental withdrawals from the system that are hurting us downstream. How can you say there are no cumulative impacts?</p>	<p>The Surplus Water Report and EA did complete a cumulative impacts analysis of the anticipated depletions from the system, in evaluating this temporary use and showed no significant impact. In addition the Corps is considering two additional actions to address this concern. First the Corps intends to include a clause in the surplus water agreements permitting the Government to terminate or suspend performance of the contract in the event that withdrawals of surplus water result in unexpected impacts to project purposes or operations. Secondly, the Division Engineer indicates that in the unlikely event that drought conditions materialize during the limited duration of the surplus water contracts, any minimal effect associated with the withdrawal of new surplus water contracts be mitigated by temporary adjustments in the application of the guide curves established in the Missouri River Master Water Control Manual.</p>
<p>Q. Will there be any impacts to other users?</p>	<p>We have determined that 100,000 acre-feet of water can be made available as surplus water to those that have requested it over the next ten years. No downstream beneficiaries or holders of water rights will be harmed by this use and it will not have an appreciable impact on other project purposes.</p>
<p>47. The public meeting in Bismarck was disappointing.</p>	<p>Response: The Corps recognizes the limits of the facility used for the public meeting and will take this comment into consideration in future events.</p>

Thematic Questions/Comments	Responses
<p>48. As the Corps has no authority to allow water withdrawal without contracts, the no action alternative of “water users will continue to withdraw water from the project” is illogical and indefensible, and usurps the intent of the NEPA.</p>	<p><u>Response:</u> The Corps is currently evaluating all users and is addressing this issue.</p>
<p>49. The hydrologic analysis and depletions projections are inadequate.</p>	<p><u>Response:</u> The Proposed Action for this EA is the temporary use of up to 100,000 acre-feet of surplus water (257,000 acre-feet of storage) from the Garrison Dam/Lake Sakakawea Project to meet municipal and industrial (M&I) water supply needs in the region over a 5-10 year period. As illustrated in Section 4 and Table 2 of the EA, the No Action alternative would result in 100,000 acre-feet of depletions from the Missouri River upstream from Lake Sakakawea, as would the Proposed Alternative. The only difference between the alternatives involves 527 acre feet of water that under the Proposed Action would be removed from Lake Sakakawea and under the No Action alternative would be provided by continued conversion of agricultural permits to M&I under a State program. Thus, 100,000AF depletion is not attributable to the proposed action, only the 527 additional AF per year would be. However, the report provides the reader context within which to understand the very small extent of change that 100,000 AF presents relative to the magnitude of the Missouri River system and its operation. Based on the magnitude of hydrologic changes that have been demonstrated to be associated with a depletion of 100,000AF (i.e., nearly immeasurable with regard to hydrologic effect), the scope of the analysis in the report is considered to be appropriate in determining significance of impacts related to the no action and the proposed alternative 527 AF.</p>
<p>50. Water quality impacts analysis is inadequate.</p>	<p><u>Response:</u> As mentioned above, the EA demonstrates that the Corps of Engineers took a “hard look” at quantifying the potential significance of the proposed action relative to the existing environmental baseline, prior to examining impacts specific to each resource area. As such, the document provides an appropriate level of analysis within each resource area for determination of significance.</p> <p>With regard to the water quality analysis, an extremely conservative approach to the analysis was taken by assuming a system-wide depletion of 150,000 acre-feet (essentially the difference of the alternatives from the environmental baseline). The analysis was conducted using the CE-QUAL-W2 model, which represents the best available water quality model to the Corps for measuring water quality differences in Lake Sakakawea. The water quality analysis showed a lowering of the depth to 15° C and 5 mg/l on the isopleths of less than one foot for the typically wet (2003) year and approximately two feet for the typical dry (2006) year. The Root Mean Square for each of these is greater than the actual predicted changes of the model, showing that there are no statistical differences that can be drawn from the results. The Corps used this analysis to meet the “hard look” standard in determining significance of impacts to water quality. The predicted change is so small as to not be measurable by the best modeling tools available.</p>
<p>51. There are concerns with the indirect effect of oil and gas development, and practice of hydrofracing.</p>	<p><u>Response:</u> Many of the comments received on the EA were related to broader issues that are not part of the current decision. Specifically there are concerns as to the lack of information in the EA regarding how the provision of water to the oil and gas industry will impact the human environment. The EA makes a logical argument as to why oil and gas industry will not be affected by this federal decision, including that water is currently readily available to the industry (without a Corps action), and that there are other economic factors (such as supply of people and rigs, and the price of oil) upon which the industry is dependent. The fact that the industry is currently rapidly expanding in North Dakota is further evidence that these factors are the driving force of the industry. The Surplus Water Report and EA have been edited to add further discussion regarding the relationship of oil prices to industry growth to better address that the provision of water will not affect growth of the oil and gas industry.</p>

Thematic Questions/Comments	Responses
<p>52. The alternatives analysis should more fully characterize the no action alternative.</p>	<p><u>Response:</u> The report goes to great lengths to describe the development of alternatives, describing the planning goals, objectives, and constraints important in alternative development, and the management measures that are available to support needs. Within the description of these measures, the document details why or why not each one is determined to be a "feasible" alternative, or the rationale as to its screening from further consideration. Upon the screening, document defines the most likely future without project condition as the "least costly combination of feasible measures" to form the basis of comparison with the preferred alternative. The EA substantiates the likelihood of the no action alternative by describing the oil and gas industry as profit maximizing producers, and as such, it is reasonable to expect that oil and gas companies would choose the least costly method of obtaining water when needed.</p>
<p>53. The cumulative impacts analysis in the EA underestimates potential future depletions and doesn't include NAWS and Red River Valley projects.</p>	<p><u>Response:</u> A total of 50,527 acre-feet of depletions (including 527 acre-feet at Lake Sakakawea and 10,000 acre-feet each at the other five system reservoirs) was assessed in the report to evaluate the cumulative effects of removing an additional 10,000 acre-feet of water from each of the other five system reservoirs. The depletion data, that the Corps received from the Bureau of Reclamation, are adjusted up for other forecasted depletions such as other basin projects, population/M&I growth, and the Northwest Area Water Supply (NAWS) project. The Red River Valley Water Supply Project was not included in this analysis, as this project has not yet been authorized by Congress and would operate only during extreme extended droughts once authorized and constructed. The analysis shows that impacts to water surface elevations and flow releases are relatively the same for the proposed action and no action. As such, further analysis of hydrologic effects within the reservoirs and river reaches would be beyond the scope of the EA.</p>
<p>54. It is not clear what the environmental impacts of lost hydropower are (i.e. CO2 releases from replacement energy).</p>	<p>10,000 AF was chosen as a conservative upper boundary of future demand at the other Missouri River Reservoirs for M&I water supply.</p> <p><u>Response:</u> The Corps did not evaluate impacts that might occur due to a need for alternative energy to replace energy lost from hydropower. Due to the relatively small amount of depletion to the system that would result as a result of the proposed action, very little energy loss is anticipated. Due to the intensity of the impact being very small relative to the context in which the impacts would be occurring, such an impact was considered to be de minimus.</p>
<p>55. The report improperly concludes there is no environmental justice impact.</p>	<p><u>Response:</u> The Corps determined that the action being evaluated will not have a disproportionate impact to Tribal nations. The majority of the Tribal intakes come from Reclamation projects. Within the available water and subject to Corps policy and environmental laws, the Corps provides easements to all qualified applicants.</p>
<p>56. What if there is substantial new information or changes that occur with regard to the impacts of the Federal action.</p>	<p><u>Response:</u> If there are any substantial changes to the proposed action, or significant new circumstances or information becomes available that would change the scope of the evaluation conducted within the EA, a new or supplemental NEPA review would be necessary.</p>

Thematic Questions/Comments	Responses
<p>57. It appears that the Corps may be relying on a piecemeal approach in order to keep potential cumulative impacts of water intake projects below the significance threshold.</p>	<p><u>Response:</u> The purpose and need of the report is to identify and quantify whether surplus water is available in Lake Sakakawea project, as defined in Section 6 of the 1944 Flood Control Act, and the EA provides an evaluation of the direct, indirect, and cumulative environmental impacts of the proposed action and the "no action" alternatives for obtaining 100,000 AF surplus water. The use of a total of 257,000 acre-feet of storage (100,000 acre-feet of yield) is analyzed in the report, and accounts for the total amount for which current and future easements will be allowed to use from Lake Sakakawea. In addition, the cumulative effects analysis conservatively assumed 10,000 AF to be identified as surplus at each of the other Missouri River Projects. Thus, the EA depletions analysis does account for currently proposed intakes, as well as future M&I intakes that are likely to occur. In addition, typical intake designs that are thought to be representative of future applications were evaluated in order to give an approximation of how the features are likely to be constructed and what environmental impacts might be expected thereof. Future applications that are received by the Corps for water intakes will however require separate, independent NEPA review in order to evaluate site specific impacts that cannot be evaluated in this document.</p>
<p>All future easements and water supply contracts will require review by the Corps of Engineers prior to allowing placement of infrastructure. In this process, the Corps will complete NEPA evaluations and comply with all appropriate environmental laws and regulations.</p>	
<p>58. The Corps didn't consider climate change in its analysis.</p>	<p><u>Response:</u> Climate change is inconsequential considering the short term nature of the analysis.</p>
<p>59. This action requires an EIS.</p>	<p><u>Response:</u> Based on the environmental assessment the conclusion is that a finding of no significant impact (FONSI) is warranted.</p>
Other	
<p>Q. Will a reallocation study be done as you promised back in May 2010?</p>	<p>We are addressing the immediate need and then will consider what should be done next to address the water supply purpose of the mainstem system.</p>
<p>Q. What are you trying to accomplish by developing a comprehensive strategy for water supply in the Missouri River Basin?</p>	<p>Ultimately, we would like to accomplish three objectives:¹⁾ differentiate among temporary and long-term/permanent M&I needs, 2) ensure that Section 6 is used to address provisional M&I needs, and 3) ensure that the Water Supply Act of 1958 is used for permanent needs.</p>
<p>Q. Why did it take so long for the Corps to notify the Delegation of the new Real Estate Policy Guidance Memorandum change in policy?</p>	<p>The requests that we received for water intake easements to support the oil and gas industry were the first to trigger the new requirement. It was shortly after the receipt of those applications that the Delegation was engaged in the discussion.</p>
<p>Q. Is the Omaha District the only one not in compliance with the new RE policy or are there other Districts?</p>	<p>There were other districts that were using easements to allow water withdrawals at Corps projects. While there may still be a few other districts that have not come into complete compliance, the Omaha District certainly has the most withdrawals without the appropriate surplus water or water storage contract in place.</p>
<p>60. The timing of this study is poor considering recent demand for water by oil and gas industry. This study should not delay or become an impediment to the development of irrigation and/or M&I projects.</p>	<p><u>Response:</u> The real estate policy guidance was enacted in July of 2008, which changed District processes for issuing easements. The District is applying those processes.</p>

Thematic Questions/Comments	Responses
<p>61. Why is this separate study even necessary when the Corps is already conducting the Missouri River Authorized Purposes Study (MRAPS)? Why can't the Corps lump the water supply issues in with that study and handle all of those Missouri River issues at the same time. How will the Corps coordinate these various studies.</p>	<p><u>Response:</u> MRAPS authorized the Corps to study the Missouri River Projects located within the Missouri River to review the authorized project purposes based on the 1944 Flood Control Act and subsequent legislation and judicial rulings to determine whether changes to the project purposes or existing federal water resources infrastructure are warranted. A study to identify surplus water in Lake Sakakawea is outside the scope of that study. However, the Corps is developing a comprehensive strategy to address long term regional water needs that may involve the Administration, Congress, and stakeholders. The Corps will consider its current studies as part of the overall strategy.</p>
<p>62. Is the water needed to meet the flows required under the current Master Manual considered an allocation, and will allowing use of surplus water impact the downstream flows?</p>	<p><u>Response:</u> The water needed to meet the flows required under the Master Manual is not considered an allocation. The Corps has determined that use of surplus water for municipal and industrial purposes as analyzed in this report would not have a significant effect on other authorized uses or change the way the system is operated under the current Master Manual because of the relatively small amount of water that is being used in light of the total system storage. In addition, the 2004 Master Manual Review and Update assumed depletions from the system for current and future depletions, which included both municipal and industrial use as well as irrigation.</p>
<p>63. The draft Report only uses visitation numbers to 2006, and updated visitation numbers should be used in the report to account for variation in visitation between low water (2006) and 2009 and 2010 (more normal years).</p>	<p><u>Response:</u> The report has been updated to include the most current visitation information.</p>
<p>64. Nowhere does the Draft Report identify or quantify reservoir allocations for authorized project purposes (specifically irrigation).</p>	<p><u>Response:</u> There is not a specific allocation of storage for the irrigation project purpose. Storage from the carryover is used for the irrigation purpose, as well as other purposes. Based on the original authorization and the Missouri Cost Allocation (1958), while the projects were authorized and designed to accommodate large amounts of storage for irrigation water, the actual demand has not developed as anticipated.</p>
<p>65. The proposed water intakes would require easements across tribal lands, and may conflict with existing pipelines from existing water intakes.</p>	<p><u>Response:</u> The Corps may only grant property interests on land it administers. If an intake location requires the user to cross Tribal or Forest Service land, those entities are authorized to deny the request or grant them with whatever restrictions they think are advisable.</p>
<p>66. These newly proposed water intakes may compete with tribal sales of water to the oil and gas industry again negatively affecting the MHA Nation.</p>	<p><u>Response:</u> The Corps has no authority to deny an easement request for access to water to which the user has a valid legal interest because the user may compete with a Tribe for water sales.</p>
<p>67. There is more than enough groundwater to supply needs of the oil and gas industry.</p>	<p><u>Response:</u> Based on data the Corps gathered he North Dakota Water Commission is opposed to the use of ground water for oil and gas development because that source is allocated to the extent the Commission feels is advisable. Future allocations of groundwater for this purpose are uncertain.</p>
<p>68. If the Corps is operating the system to meet the needs of downstream intakes, will water supply agreements be necessary for downstream intakes?"</p>	<p><u>Response:</u> Under the Master Manual, releases to meet the needs of downstream water intakes are made "to the extent reasonably possible", so releases are not guaranteed. If a downstream user required a specific, single purpose water supply release, the Corps would require a water supply agreement for that purpose. There have been times when downstream intakes were put out of service because it was not "reasonable" for the Corps to make a release to meet the minimum flow requirements.</p>
<p>69. Provide source of Reclamation depletions used by the Corps for their modeling.</p>	<p><u>Response:</u> A report documenting depletions for the RRVWSP was provided by the Reclamation's Great Plains Regional Office and is titled "A Study to Determine the Historic and Present-Level Streamflow Depletions in the Missouri River Basin for the Period 1929 to 2002", Dated January 2005.</p>

Thematic Questions/Comments	Responses
70. Infrastructure needs to be included in table 3-30 to make the comparison analogous.	Response: The infrastructure costs were not included for any of the alternatives. The alternative costs include the provision of supply. Infrastructure costs for the permit applications are available, but only general (and much higher) infrastructure costs for the Williston Plant are provided at this time.
71. The Report is not consistent with Corps policy to exclude the permanent pool from usable storage	Response: As part of this Garrison Surplus Water Report the Corps examined the way the system is operated. Garrison in cooperation with the other mainstem projects is operated to service project purposes by using the available water in the system including the permanent pool. Because of this reason, it is appropriate to include the permanent pool as part of the total usable storage in our calculations.
72. Accurate water usage data should be obtained by the Corps	Response: The Corps obtained reported usage records from the State on as many easements as possible on Lake Sakakawea. These records were used in the demand analysis. Additional information on tribal intakes constructed under Reclamation authorities were also added and considered.
73. Include the U.S. Fish and Wildlife Service recommendations for avoiding adverse impacts to Fish and Wildlife resources, including T&E species.	Response: The Corps has reviewed and incorporated recommendations from the U.S. Fish and Wildlife Service on monitoring amount of water withdrawn at intake sites, avoiding impacts to T&E species, migratory birds, and other natural resources considered to be of high value.
74. The length of comment period was insufficient to provide comments.	Response: The comment period was originally scheduled from 16 December 2010 through 17 January 2011. In response to several requests for additional review time, a fifteen day extension was granted and comments were collected through 1 February 2011. A public meeting was also held on 6 January 2011 in Bismarck, ND to provide the public opportunity to provide comments.
75. Sediment storage should be designated in the Permanent zone rather than Carry over multiple use pool.	Response: We have changed the document to state that the permanent pool will be utilized.
76. Coordinate with the State of North Dakota on water use.	Response: The Corps has worked extensively with North Dakota to gather data and has used the best available information for an accurate depiction of water use.
77. Need more information to be able to complete a review.	Response: The Corps responded to all requests for more information that were received during the comment period.

[REDACTED] NWO

From: Quinn, Kevin R NWO
Sent: Monday, May 16, 2011 12:11 PM
To: cfong@nd.gov; [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02
Subject: (UNCLASSIFIED)
Attachments: NR-RIVERWATCH5-11.No4docx.docx

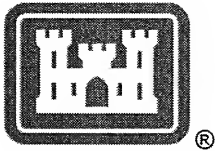
Classification: UNCLASSIFIED

Caveats: NONE

Riverwatch Daily #4

Classification: UNCLASSIFIED

Caveats: NONE



U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

NEWS RELEASE

For Immediate Release: July 2, 2011

Contact: Kevin R. Quinn 402-995-2419

kevin.r.quinn@usace.army.mil

Jody Farhat 402-996-3840

Riverwatch Daily – Garrison and Oahe Dams

Update #4

OMAHA, Neb. – Due to high runoff from the far-above-normal plains and mountain snowmelt, the U.S. Army Corps of Engineers is evacuating large volumes of water from Garrison Dam in Riverdale, N.D. and Oahe Dam near Pierre, S.D.

In expectation of continued high runoff, the U.S. Army Corps of Engineers will release a daily bulletin detailing releases and levels for both dams. Below are the May 16, 2011 statistics for the two dams:

Daily Information Update

Garrison Dam and Lake Sakakawea:

- Midnight reservoir level – 1849.3 feet mean sea level
- Yesterday's Reservoir Inflow – 75,000 cubic feet per second (cfs)
- Current Reservoir Release – 50,000 cfs
- Annual Flood control and multiple use zone – El. 1,837.5 to 1,850 msl
- Exclusive flood control zone– El. 1,850-1,854 msl
- Top of spillway gates - 1,854 feet msl
- 6 a.m. River Stage at Bismarck-12.8 feet (Flood stage at Bismarck-16.0 feet)
- Planned scheduled releases
 - Monday, May 16: increase to 50,000 cfs at 8 am.
 - Tuesday, May 17 hold 50,000 cfs
 - Wednesday, May 18: increase to 52,000 cfs at 8 a.m.

Oahe Dam and Lake:

- Midnight reservoir level – 1616.8 feet msl
- Yesterday's Reservoir Inflow – 48,000 cfs
- Yesterday's Reservoir Release – 50,400 cfs
- 6 am river stage at Pierre 10.7 feet (Flood stage 15.0)
- Annual Flood control and multiple use zone – El. 1607.5 to 1617.0 feet msl
- Exclusive flood control zone – El. 1617.0 to 1620.0 feet msl
- Top of spillway gates: - 1620.0 feet msl
- Planned scheduled releases:
 - Monday and Tuesday, May 16 and 17: 57,500 cfs
 - Actual releases may not equal scheduled releases because Oahe is being used to follow power loads.

Garrison Dam is a 210-foot high rolled earth embankment. Discharges are normally passed through five power tunnels having a combined discharge capacity of 41,000 cfs, and three flood tunnels having a combined discharge capacity of 98,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with 28 tainter gates and has a maximum discharge capacity of 660,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will go through the power plant and regulating tunnels.

(more)

U.S. Army Corps of Engineers – Omaha District 1616 Capitol Ave., Omaha, Neb. 68102

<http://www.nwo.usace.army.mil/>

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[Type text]

Oahe Dam is a 245-foot high rolled earth embankment. Discharges are normally passed through seven power tunnels having a combined discharge capacity of 56,000 cfs, and six flood tunnels having a combined discharge capacity of 111,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with eight tainter gates and has a maximum discharge capacity of 80,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will be made through the power plant and outlet tunnels.

Daily bulletin updates are available from the Corps' website: <http://www.nwo.usace.army.mil/>

Northwestern Division's water management website for the most up to date information:
<http://www.nwd-mr.usace.army.mil/rcc/index.html>

U.S. Army Corps of Engineers Contact: Jody Farhat, Chief, Missouri River Basin Water Management 402-996-3840

###

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 11:43 AM
To: [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO
Cc: [REDACTED] NWO
Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]

Our group has historically coordinated additional flow measurements with the USGS. I will give you a call to discuss scope of work and funding.

[REDACTED]

-----Original Message-----

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 11:27 AM
To: [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO;
[REDACTED] NWO
Cc: [REDACTED] NWO
Subject: RE: Water Surface Profile (UNCLASSIFIED)

[REDACTED]

The Sed & channel Stab section has scheduled collection of a Garrison to Oahe water surface profile to be collected this summer, tentatively in the June/July time frame.

Note, other type of data collection such as setting additional gages, collecting more readings, etc. would not be addressed by the profile. If those actions are desired, they would have to be addressed by a different COE office.

[REDACTED]

-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 12:21 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO
Subject: FW: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

All,
I did talk with the State Water Commission about this. There are multiple entities interested in obtaining updated flow and stage data on the Missouri River at Bismarck. I know that at Jamestown, we hired the USGS to complete multiple readings for us. I'm not sure about the logistics on this but concur that this would be a great opportunity to update our data, once we stabilize at the higher flows.

The State Water Commission indicated that they'd be willing to assist however they could. I do not understand the logistics of this or how we make it happen but strongly support the

idea. Please let me know if you need additional funding or if you need me to coordinate some issues with the State?

-----Original Message-----

From: Michael Gunsch [<mailto:mgunsch@houstoneng.com>]

Sent: Saturday, May 14, 2011 11:44 AM

To: Swenson, Michael A NWD02

Cc: [REDACTED] NWO; Fleck Terry (tfleck@attitudedr.com); Gailen Narum; Craig Odenbach; Sando, Todd S. (tsando@nd.gov); [REDACTED] NWO; Wade Bachmeier; Bill Robinson (brobinson@northlandfinancial.net); Bruce W. Engelhardt (bengelhardt@nd.gov); kcasteel@nd.gov
Subject: RE: Water Surface Profile

[REDACTED] and [REDACTED]:

Given the high flows on the Missouri of extended duration the Burleigh County Water Resource District would like to have the COE obtain elevation data along the river for these flow conditions. This is an important opportunity to gather information on the system conveyance and various flood stages. As previously noted the rating curves at Bismarck indicate elevations of 6 inches or more higher for these designated flows. How this extends to larger flows is unknown, but is critical in future management of the Missouri River floodplain, and to forecast potential high flow impacts. Therefore, this information needs to be obtained.

I understand the COE has obtained elevation information in the past, but the timing of these flows makes it critical to gather data as the flows occur and change. The question is who is going to gather this information? Understand the NDSWC might be interested in assisting. Let me know what is being planned and when it will be completed.

Thanks,

Michael H. Gunsch, PE

Senior Project Manager/Principal

Description: Description: [cid:021080921@26012009-10E2](#)

3712 Lockport Street

Bismarck, ND 58503

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Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 11:38 AM
To: Farhat, Jody S NWD02
Subject: FW: River watch email

Hi Jody. Marty Boeckel asked to be added to "River Watch"...is that you? If so, can you add me too?

[REDACTED] Kayla

-----Original Message-----

From: Boeckel, Marty (Conrad) [<mailto:marty.boeckel@conrad.senate.gov>]
Sent: Monday, May 16, 2011 11:34 AM
To: [REDACTED] NWO
Subject: River watch email

Hi [REDACTED]

Does Jody have a "River Watch" she sends out? If so, I would like to be put on the email list. Thanks!

Best, Marty

Marty Boeckel
State Director - West
U.S. Senator Kent Conrad
220 E. Rosser Ave., Rm. 228
Bismarck, ND 58501
701.258.4648 Office
701.793.0837 Cell

www.conrad.senate.gov <<http://www.conrad.senate.gov/>>

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 11:27 AM
To: [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO
Subject: RE: Water Surface Profile (UNCLASSIFIED)

[REDACTED]
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[REDACTED]
-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 12:21 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO
Subject: FW: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

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The State Water Commission indicated that they'd be willing to assist however they could. I do not understand the logistics of this or how we make it happen but strongly support the idea. Please let me know if you need additional funding or if you need me to coordinate some issues with the State?

[REDACTED]
-----Original Message-----

From: Michael Gunsch [<mailto:mgunsch@houstoneng.com>]
Sent: Saturday, May 14, 2011 11:44 AM
To: [REDACTED] NWD02
Cc: [REDACTED] NWO; Fleck Terry (tfleck@attitudedr.com); Gailen Narum; Craig Odenbach; Sando, Todd S. (tsando@nd.gov); [REDACTED] NWO; Wade Bachmeier; Bill Robinson (brobinson@northlandfinancial.net); Bruce W. Engelhardt (bengelhardt@nd.gov); kcasteel@nd.gov
Subject: RE: Water Surface Profile

[REDACTED] and [REDACTED]

Given the high flows on the Missouri of extended duration the Burleigh County Water Resource District would like to have the COE obtain elevation data along the river for these flow conditions. This is an important opportunity to gather information on the system conveyance and various flood stages. As previously noted the rating curves at Bismarck indicate elevations of 6 inches or more higher for these designated flows. How this extends to larger flows is unknown, but is critical in future management of the Missouri River floodplain, and to forecast potential high flow impacts. Therefore, this information needs to be obtained.

I understand the COE has obtained elevation information in the past, but the timing of these flows makes it critical to gather data as the flows occur and change. The question is who is going to gather this information? Understand the NDSWC might be interested in assisting. Let me know what is being planned and when it will be completed.

Thanks,

Michael H. Gunsch, PE

Senior Project Manager/Principal

Description: Description: cid:021080921@26012009-10E2

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Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 10:20 AM
To: Farhat, Jody S NWD02
Subject: RE: CMT Brief with BG McMahon (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

It is uploaded and can be found at the following location:

<https://kme.usace.army.mil/CoPs/Emergency-Management/NWD/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2fCoPs%2fEmergency%2dManagement%2fNWD%2fShared%20Documents%2f16%20May%202011%20NWD%20CMT%20Briefing&FolderCTID=%7b9743C595%2dEFB7%2d4037%2d8BD4%2d5E335D120B69%7d>

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
[REDACTED] Office
[REDACTED] Blackberry
[REDACTED]@usace.army.mil

-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Monday, May 16, 2011 10:17 AM
To: [REDACTED] NWO
Subject: RE: CMT Brief with BG McMahon (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Looks good, Kim. Here's what I'm presenting. I haven't had any luck uploading my presentation to the sharepoint site. Did the link John provided work for you and is there some trick to it other than just copying and pasting?

-----Original Message-----
From: [REDACTED] NWO
Sent: Monday, May 16, 2011 10:09 AM
To: Farhat, Jody S NWD02
Subject: CMT Brief with BG McMahon (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,

Just FYI. Here is NWO's CMT Briefing Slides for today's brief.

Thanks,
[REDACTED]

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102

[REDACTED] Office
[REDACTED] Blackberry
[REDACTED] [\[REDACTED\]@usace.army.mil](mailto:[REDACTED]@usace.army.mil)

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Burke, Linda NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 10:09 AM
To: Farhat, Jody S NWD02
Subject: CMT Brief with BG McMahon (UNCLASSIFIED)
Attachments: NWO_CMT_Brief.pptx

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,

Just FYI. Here is NWO's CMT Briefing Slides for today's brief.

Thanks,
[REDACTED]

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
[REDACTED] Office
[REDACTED] Blackberry
[REDACTED]@usace.army.mil

Classification: UNCLASSIFIED
Caveats: FOUO

CENWO NM NLE - 11

LTC James J. Jordano

Deputy Commander

16 May 2011



US Army Corps of Engineers
BUILDING STRONG®



NM NLE-11 Tasks

- Personnel Accountability
- Project / Field Office Damage Assessment
- PRT Deployment – Infrastructure Assessment
- Personnel Support to CENWK – Flood Fight
- ARNORTH Augmentation
- EFO Establishment – Macon, MO
- Communication Viability – Portable VTC Check



Flood Brief

16 May 2011



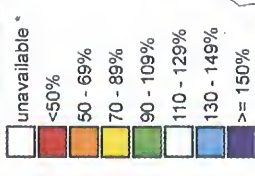
BUILDING STRONG®



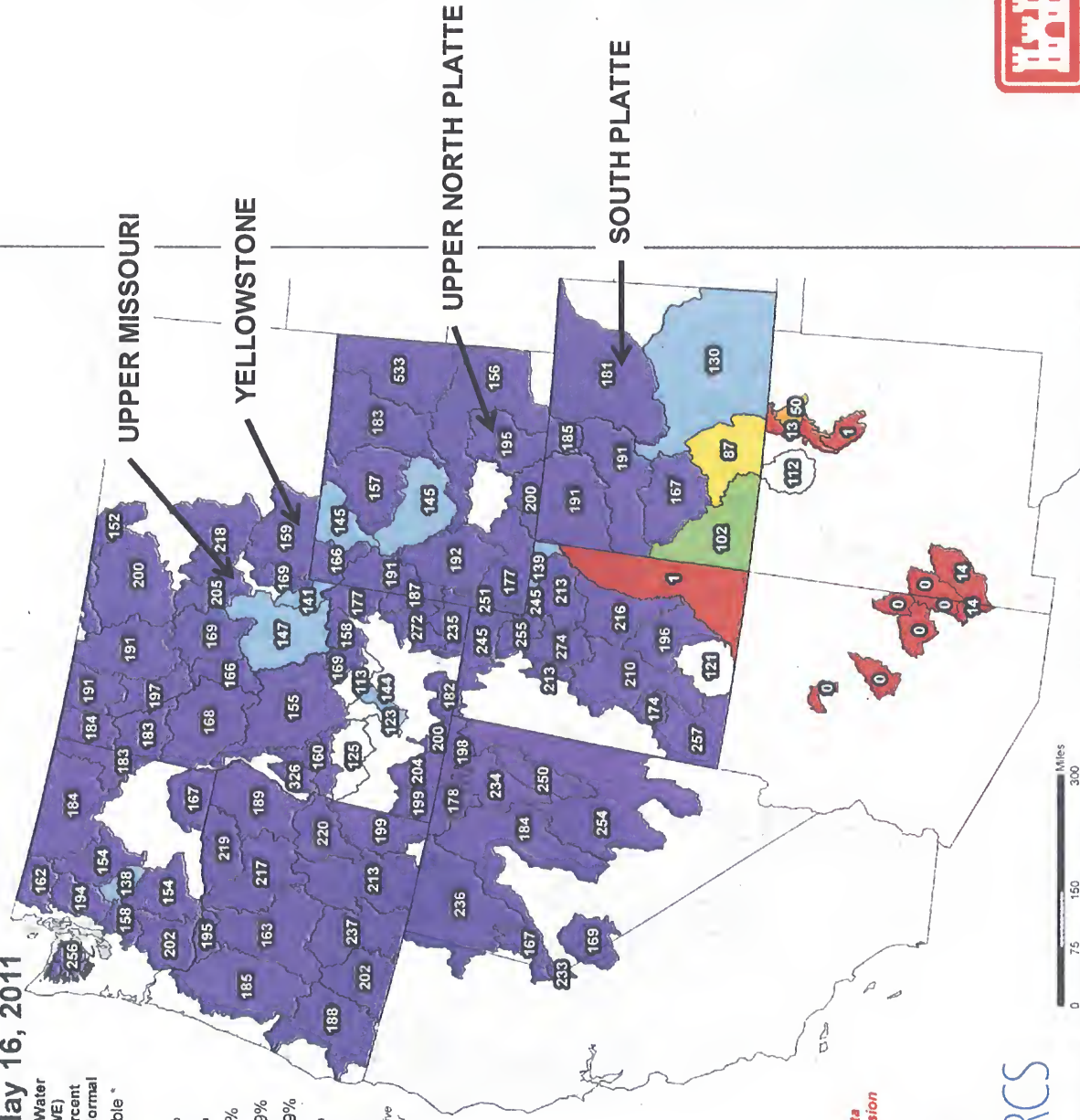
Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

May 16, 2011

Current Snow Water
Equivalent (SWE)
Basin-wide Percent
of 1971-2000 Normal



* Data unavailable
at time of posting
or measurement
is not representative
at this time of year



Provisional data
subject to revision



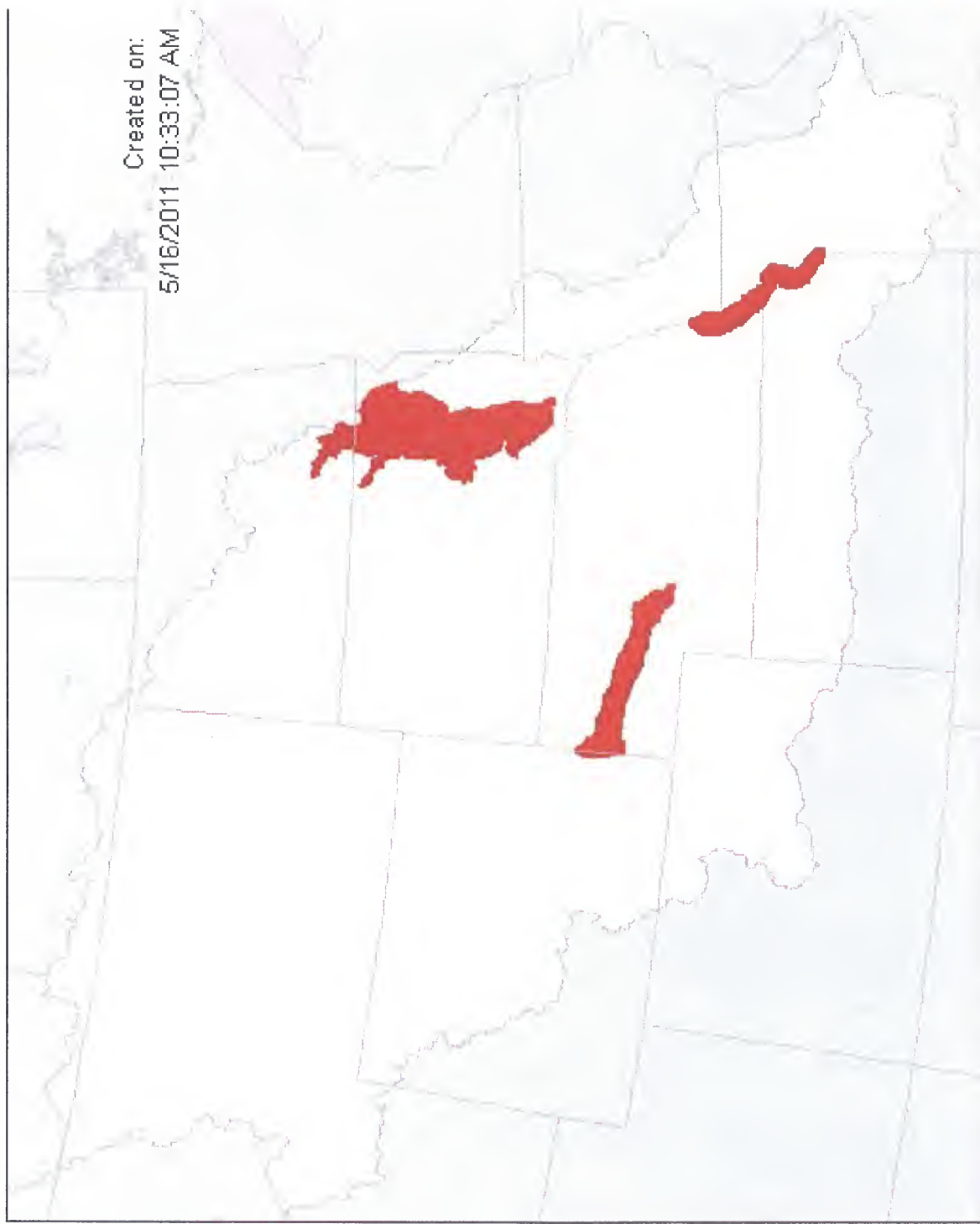
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047



HILLING STRONG®

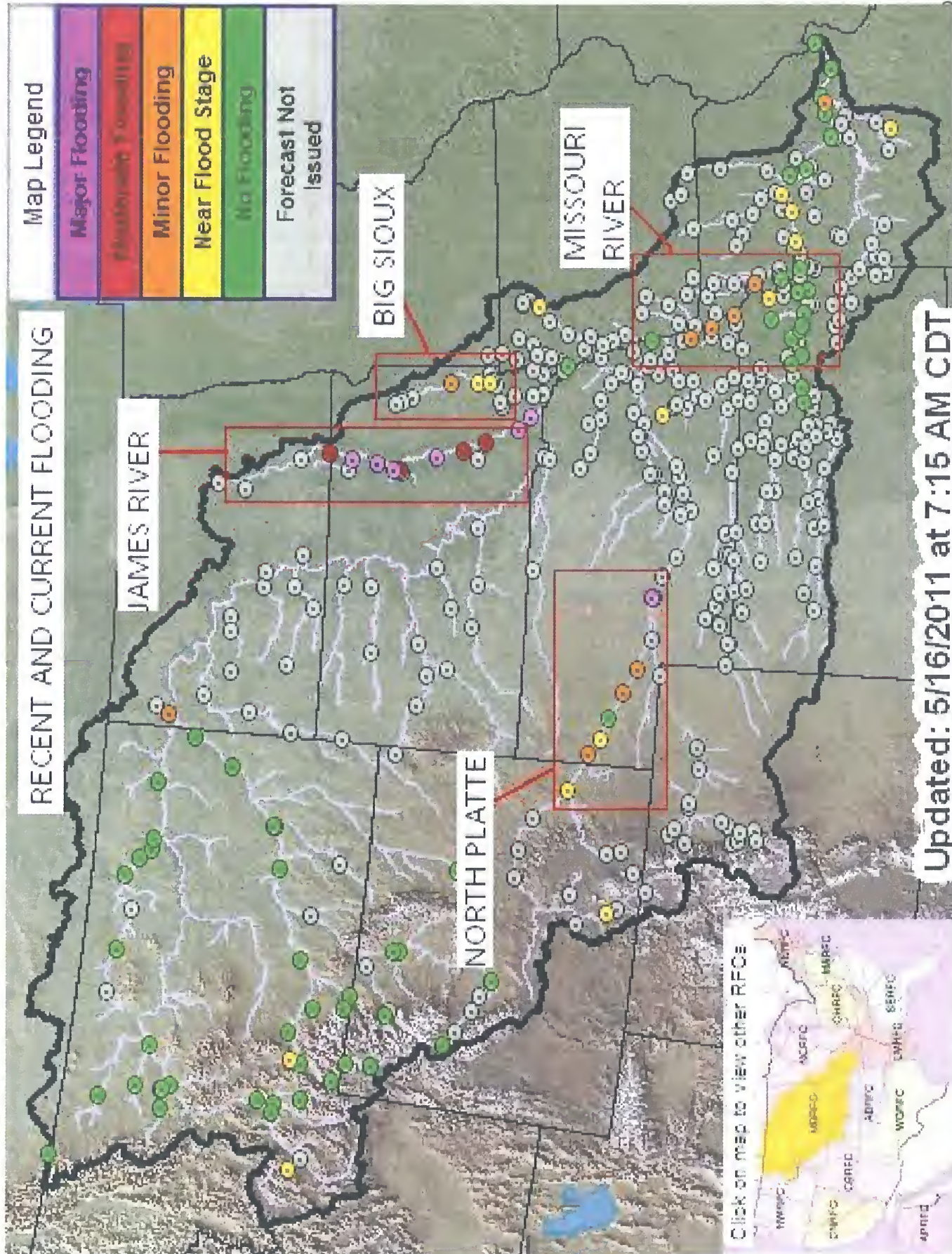
NWS 7-10 DAY FLOODING FORECAST



-  SIGNIFICANT RIVER FLOODING POSSIBLE.
-  SIGNIFICANT RIVER FLOODING LIKELY.
-  SIGNIFICANT RIVER FLOODING OCCURRING OR IS IMMINENT.



RONG®



Potential Problem Areas

- Henry, NE
- Mitchell, NE
- Scottsbluff, NE
- Bridgeport, NE
- Broadwater, NE
- Lisco, NE
- Lewellen, NE
- North Platte, NE
- Kearney, NE
- Grand Island, NE
- Casper, WY
- Elk Mountain, WY
- Saratoga, WY
- Medicine Bow, WY
- Blackfeet Nation, MT
- Many small towns – MT, WY, and NE



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Strategic Issues

Last 24 Hours

- Received Request from State of NE – North Platte River Basin

Requests for Assistance

- State of MT – AM Tech, EO Tech and Direct
- State of NE – EO Tech and Direct
- State of WY – AM Tech and Direct
- State of ND – EO Tech
- Minot AFB – Tech Assist

Next 24 Hours

- Continue to prepare for North Platte River Issues
- Continue coordination and info distribution on Missouri Mainstem Reservoir Conditions
- Provide onsite technical assistance at Minot AFB
- Continue preparation of 3 PIRs for WY
- Continue tech assist for MT, NE, WY, and ND

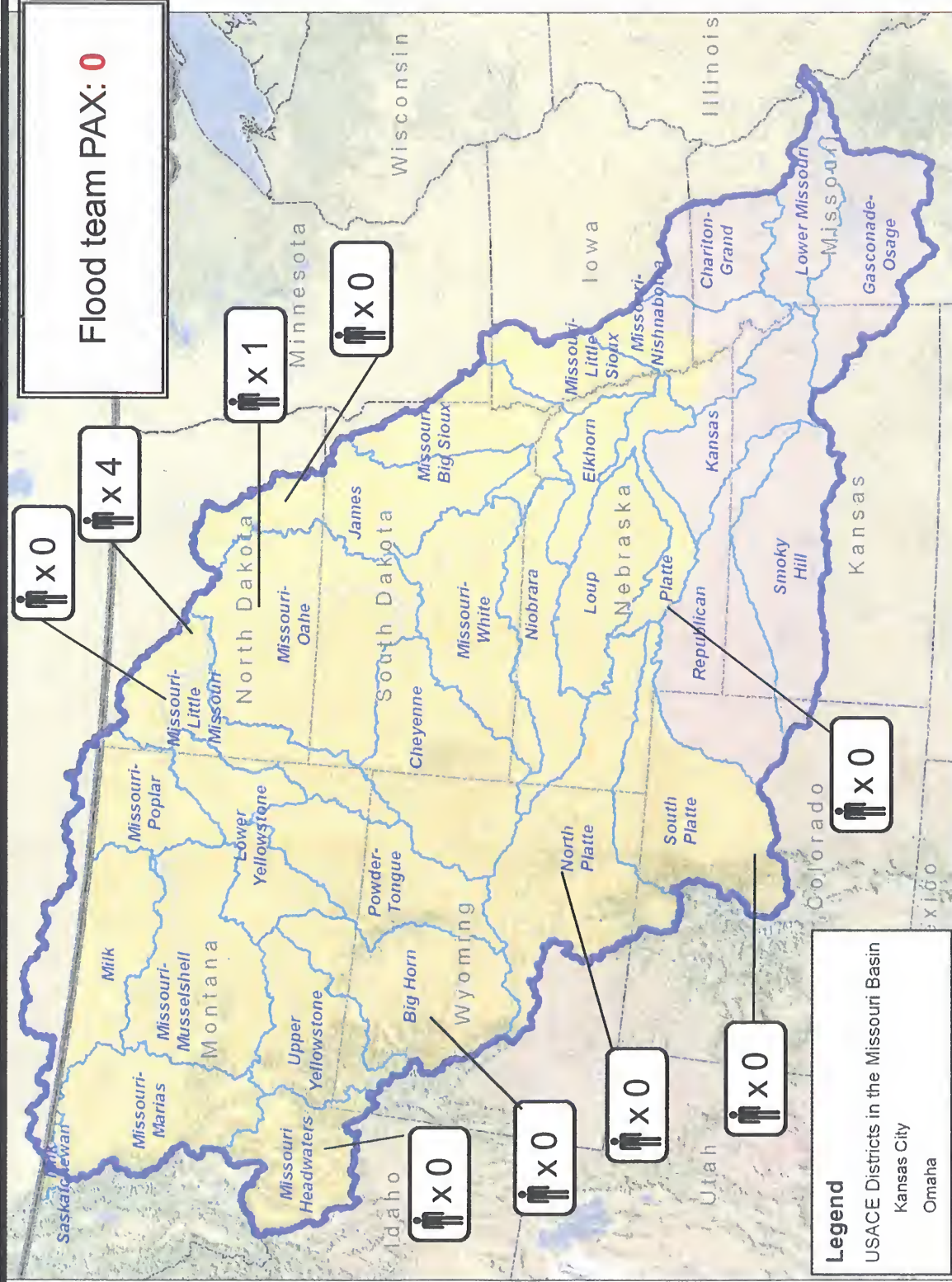
Flood Preparedness

- Continue coordination with all 7 States
- Continue coordination with all Tribes
- Continue coordination with all Congressionals
- Deployed majority of Hesco in support of MVD flooding
- Deployed pumps to MVM and now to MVN



BUILDING STRONG®

Team Deployments



EQUIPMENT AVAILABILITY



Pumps

Size (in)	Number	Deployed	Available
3	2	0	2
10	4	0	4
12	6	4	2
16	10	4	6
TOTAL	22	8	14

Sandbags

Total	Issued	Available
2,672,740	0	2,672,740

Expedient Flood Fight Products

Type	LF	Deployed	Available
Hesco	20,295	20,295	0
Portadam	1,350	0	1,350
RDFW	1,200	0	1,200
TOTAL	22,845	20,295	2,550

Sandbag Machines

Type	Number	Deployed	Available	Production Capability/hr	Maintenance Status	Tech Support
Manual	3	0	3	1500	1/1 FMC	0
TOTAL	3	0	3	4500	3/3 FMC	0



Omaha District – As of 13 May 2011

BUILDING STRONG®

NWO

From: Hogg, Jerry F [JHogg@ameren.com]
Sent: Monday, May 16, 2011 9:03 AM
To: Accu-Weather; [REDACTED] NWK; [REDACTED] NWD02; Farhat, Jody S NWD02; [REDACTED] NWD02; Hogg, Jerry F; 'Holtz, Jerry'; [REDACTED] MVS; Kaffenberger, Glenn L; DLL-NWK-ED-HC; [REDACTED] NWD02; 'Lobb, Del'; Larry Murphy; NOAA National Weather Service; [REDACTED] Parker, Ed; Steve Spaulding; [REDACTED] NWD02; Sullivan, Alan D; [REDACTED] NWD02; Thompson, Phil M; Weather Service Springfield; Witt, Warren A; 'andy_roberts@fws.gov'; 'Bryan_Simmons@fws.gov'
Subject: LOZ Lake Data 2011 yearly form.xls
Attachments: LOZ Lake Data 2011 yearly form.xls

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MO/YR January 2011 OSAGE PLANT STATISTICS

Total Inflow (with rain)	Inflow Avg Previous 7 Days 7DA	Prescribed Minimum Flow	Osage Plant Discharge	Midnight Lake Elev.	7:00 AM Lake Elev.	Rain at Osage Plant	Surface Water Temperat ure F	Actual MW Hours Generation	Inflow Forecast
-----------------------------	--------------------------------------	-------------------------------	-----------------------------	------------------------	--------------------------	---------------------------	---------------------------------------	----------------------------------	--------------------

DATE

DATE

1	1,685	2,463	900	1469	658.02	658.03	0.00	45	240	3,000
2	2,175	2,554	900	1848	658.03	658.02	0.00	44	291	1,500
3	7,292	2,786	900	981	658.27	658.04	0.00	44	147	1,500
4	7,757	3,526	900	1911	658.50	658.35	0.00	44	297	13,000
5	10,277	4,152	900	1273	658.85	658.54	0.00	44	226	2,000
6	9,482	5,402	1,080	3647	659.07	658.88	0.00	44	581	10,000
7	3,995	6,535	1,307	8713	658.88	659.18	0.00	44	1398	4,500
8	857	6,095	1,219	3262	658.78	658.85	0.00	44	466	1,000
9	602	5,977	1,195	4275	658.63	658.80	0.00	44	638	1,000
10	7,563	5,752	1,150	11985	658.45	658.61	0.00	44	1906	8,000
11	7,763	5,791	1,158	16202	658.11	658.49	0.00	44	2541	6,000
12	6,148	5,901	1,158	12026	657.87	657.99	0.00	44	1885	6,000
13	7,628	5,201	1,040	12136	657.68	657.85	0.00	44	1907	6,000
14	4,363	4,937	987	11308	657.40	657.63	0.00	44	1791	3,000
15	1,679	4,989	997	1006	657.42	657.42	0.00	44	163	1,000
16	1,103	5,107	1,021	1041	657.44	657.43	0.00	44	171	1,000
17	1,241	5,178	1,035	7849	657.14	657.42	0.00	44	1221	3,000
18	2,814	4,275	900	6438	656.99	657.20	0.00	44	987	1,200
19	2,142	3,568	900	2982	656.95	656.99	0.00	48	424	1,200
20	752	2,993	900	4288	656.80	657.00	0.19	48	684	1,200
21	2,735	2,011	900	10888	656.46	656.66	0.00	48	1744	1,200
22	1,929	1,778	900	1206	656.47	656.48	0.00	48	187	1,000
23	758	1,771	900	1141	656.45	656.44	0.00	40	175	1,000
24	253	1,722	900	11718	655.97	656.27	0.00	40	1847	1,000
25	1,664	1,581	900	1765	655.96	655.96	0.00	40	263	300
26	1,678	1,419	900	1298	655.97	655.94	0.00	40	206	300
27	578	1,353	900	919	655.95	656.00	0.00	40	146	1,400
28	1,901	1,328	900	1040	655.98	655.96	0.00	40	163	500

Outflow Forecast	Lake Level Forecast
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1,000	658.15
1,000	658.19
1,000	658.27
1,000	658.77
1,000	658.88
2,000	659.25
9,000	659.10
1,000	659.10
1,000	658.63
12,000	658.40
11,300	658.20
11,300	657.90
11,300	657.60
11,300	657.30
1,000	657.30
1,000	657.30
3,000	657.30
3,000	656.99
4,500	656.90
11,000	656.60
1,000	656.60
1,000	656.60
6,000	656.40
10,500	656.00
1,600	655.90
900	655.90
900	656.02
900	655.97

900	655.96
900	655.98
9,000	655.68

MO/YR February 2011 OSAGE PLANT STATISTIC

Total Inflow (with rain)	Inflow Avg Previous 7 Days 7DA	Prescribe d Minimum Flow	Osage Plant Discharge	Midnight Lake Elev.	7:00 AM Lake Elev.	Rain at Osage Plant	Surface Water Temperat ure F
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DATE

1	3,907	1,148	900	3162	655.48	655.46	1.50	40
2	1,329	1,483	900	3568	655.38	655.50	0.10	40
3	1,497	1,433	900	11288	654.96	655.25	0.00	38
4	5,122	1,565	900	7183	654.87	654.84	0.00	38
5	1,454	2,025	900	2022	654.84	654.93	0.00	38
6	1,472	2,154	900	913	654.85	654.83	0.00	36
7	1,589	2,283	900	2966	654.79	654.85	0.00	36
8	8,203	2,339	900	2885	655.01	654.75	0.00	36
9	6,090	2,952	900	6447	654.99	655.04	0.20	36
10	7,095	3,632	900	8300	654.93	654.95	0.00	36
11	1,714	4,432	900	6223	654.73	654.87	0.00	36
12	799	3,945	900	1002	654.72	654.69	0.00	36
13	1,623	3,852	900	937	654.74	654.70	0.00	36
14	4,616	3,873	900	1385	654.88	654.78	0.00	36
15	6,218	4,306	3,500	4037	654.96	654.91	0.00	36
16	10,677	4,022	3,500	3742	655.25	655.10	0.00	36
17	13,328	4,678	3,500	3550	655.65	655.34	0.00	35
18	10,970	5,568	3,500	4160	655.92	655.66	0.00	35
19	8,632	6,890	3,500	9001	655.90	655.95	0.08	35
20	7,619	8,009	3,500	4381	656.02	655.87	0.00	35
21	16,107	8,866	3,546	6323	656.41	656.11	0.26	35
22	18,167	10,507	4,203	10125	656.73	656.63	0.04	38
23	17,173	12,214	4,885	9316	657.04	656.81	0.11	38
24	37,554	13,142	5,257	16483	657.88	657.02	1.12	38
25	32,982	16,603	6,641	28215	658.06	658.05	0.00	39
26	28,610	19,748	7,899	27458	658.10	658.10	0.00	39
27	36,054	22,602	9,040	23771	658.58	658.14	0.60	39
28	28,596	26,664	10,665	30106	658.51	658.62	0.00	40
1-Mar		28,437	11,375			658.37		
2								
3								
4								
5								
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10								
11								
12								
13								
14								

S

Actual MW Hours Generation		Inflow Forecast	Outflow Forecast	Lake Level Forecast
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	DATE			
516	1	1,500	9,000	655.48
567	2	1,000	3,000	655.40
1782	3	1,000	11,000	654.90
1115	4	1,500	4,700	654.80
327	5	1,500	900	654.80
143	6	1,500	3,000	654.78
479	7	1,500	7,500	654.58
451	8	6,500	3,000	654.60
1030	9	7,000	6,000	655.10
1299	10	3,000	6,000	654.75
988	11	1,800	6,200	654.68
157	12	900	900	654.68
149	13	900	900	654.68
311	14	900	900	654.75
618	15	3,000	1,500	654.95
576	16	10,000	4,000	655.45
554	17	12,000	4,000	655.60
663	18	12,000	3,500	656.00
1,408	19	7,000	3,500	656.10
698	20	5,000	3,500	656.20
1,012	21	5,000	3,500	656.30
1,614	22	14,500	9,500	656.78
1,555	23	14,500	9,500	656.95
2,687	24	22,000	12,000	657.40
4,415	25	28,000	24,000	658.50
4,313	26	24,000	24,000	658.50
3,776	27	24,000	24,000	658.50
4,654	28	28,000	34,000	658.50
	1-Mar	32,000	34,000	658.27
	2	32,000	34,000	658.15
	3	32,000	34,000	658.03
	4	32,000	34,000	
	5	28,000	30,000	
	6	28,000	30,000	
	7	28,000	30,000	
	8	28,000	30,000	
	9	28,000	30,000	
	10	28,000	30,000	
	11	24,000	28,000	
	12	24,000	28,000	
	13	24,000	28,000	
	14	24,000	28,000	

15 24,000 28,000

PLANT STATISTICS

Total Inflow (with rain)	Inflow Avg Previous 7 Days 7DA	Prescribed Minimum Flow	Osage Plant Discharge	Midnight Lake Elev.	7:00 AM Lake Elev.	Rain at Osage Plant	Surface Water Temperature F
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DATE _____

1-Mar	29,957	28,437	11,375	34147	658.33	658.37	0.00	40
2	32,105	30,132	12,053	32870	658.29	658.26	0.00	40
3	34,282	32,266	12906	33,233	658.32	658.25	0.00	40
4	33,554	31,798	12719	34,265	658.28	658.24	0.27	40
5	33,415	31,880	12752	34,237	658.24	658.20	0.00	40
6	34,242	32,566	13026	33873	658.24	658.14	0.00	42
7	32,677	32,307	12923	30838	658.30	658.19	0.00	42
8	39,430	32,890	13156	34302	658.50	658.26	0.87	42
9	28,392	34,244	13697	34415	658.25	658.57	0.00	42
10	19,363	33,713	13485	34192	657.65	658.22	0.00	42
11	33,817	31,582	12632	34028	657.63	657.52	0.00	42
12	31,762	31,619	12647	34084	657.53	657.52	0.00	42
13	31,034	31,383	12553	32585	657.46	657.47	0.29	42
14	29,017	30,926	12370	34003	657.25	657.49	0.95	42
15	32,364	30,403	12161	27199	657.45	657.15	0.00	42
16	29,930	29,394	11,757	23369	657.70	657.60	0.00	42
17	31,479	29,614	11,845	27739	657.84	657.67	0.00	42
18	31,272	31,345	12,538	30475	657.86	657.79	0.00	42
19	23,557	30,981	21,687	27515	657.69	657.69	0.82	42
20	28,154	29,809	17,885	28154	657.66	657.62	0.00	45
21	21,598	29,396	14,698	28516	657.37	657.60	0.00	45
22	28,080	28,336	11,334	31387	657.22	657.27	0.00	45
23	28,304	27,724	11,089	36747	656.87	657.13	0.00	45
24	23,194	27,492	10,996	36714	656.31	656.78	0.00	45
25	23,526	26,308	10,523	37041	655.74	656.13	0.06	45
26	21,987	25,202	10,080	37145	655.09	655.57	0.52	45
27	22,882	24,993	9,997	37059	654.48	654.89	0.06	47
28	22,536	24,224	9,689	28053	654.23	654.18	0.00	47
29	19,363	24,358	9,743	21473	654.13	654.30	0.03	47
30	16,336	23,113	9,245	20974	653.92	654.08	0.07	47
31	17,536	21,403	8,561	20549	653.78	653.74	0.00	47
1		20,584	8,233			653.90		
2								
3								
4								
5								
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8								
9								
10								
11								

12
13
14

Actual MW Hours Generatio n		Inflow Forecast	Outflow Forecast	Lake Level Forecast
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5,239	1-Mar	32,000	34,000	658.27
5,051	2	32,000	34,000	658.15
5,104	3	32,000	34,000	658.03
5,247	4	32,000	34,000	658.25
5,252	5	34,000	34,000	658.25
5,188	6	34,000	34,000	658.15
4,775	7	34,000	34,000	658.25
5259	8	34,000	34,000	658.25
5264	9	24,000	34,000	658.15
5239	10	24,000	34,000	658.05
5208	11	33,000	34,000	657.60
5201	12	32,000	34,000	657.50
4985	13	31,000	34,000	657.40
5227	14	24,000	34,000	657.10
4100	15	22,000	24,000	657.15
3,650	16	34,000	30,000	657.85
4,340	17	34,000	30,000	657.95
4,823	18	17,000	27,000	657.45
4,283	19	17,000	27,000	657.10
4,550	20	16,000	30,000	657.70
4,520	21	23,000	30,000	657.40
4,932	22	27,000	34,000	657.07
5,632	23	28,000	37,000	656.80
5,502	24	25,000	37,000	656.30
5,517	25	23,000	37,000	655.80
5,492	26	17,000	34,000	655.20
5,404	27	17,000	34,000	654.30
4,111	28	24,000	24,000	654.18
3,173	29	17,000	18,000	654.20
3,118	30	17,000	18,000	654.15
3,094	31	17,000	18,000	653.85
	1	17,000	9,000	654.15
	2	8,000	8,000	654.15
	3	8,000	7,200	654.17
	4	8,000	6,000	654.24
	5	6,000	6,000	654.24
	6	6,000	6,000	654.24
	7	6,000	6,000	
	8	6,000	6,000	
	9	4,000	4,000	
	10	4,000	4,000	
	11	4,000	4,000	

Ramp Down Day 1
Ramp Down Day 2
Ramp Down Day 3

12	4,000	4,000
13	4,000	4,000
14	4,000	4,000

MO/YR	April	2011	PLANT STATISTICS										
	Total Inflow (with rain)	Inflow Avg Previous 7 Days 7DA	Prescribed Minimum Flow	Osage Plant Discharge	Midnight Lake Elev.	7:00 AM Lake Elev.	Rain at Osage Plant	Surface Water Temperature F	Actual MW Hours Generation	DATE	Inflow Forecast	Outflow Forecast	Lake Level Forecast
DATE													
1	15,728	20,584	8,233	10695	653.99	654.02	0.00	47	1,625	1	17,000	9,000	654.15
2	9,816	19,481	7,792	10545	653.95	654.08	0.00	47	1,550	2	8,000	8,000	654.15
3	10,408	17,742	7,097	8135	654.05	654.04	0.00	49	1,210	3	8,000	7,200	654.17
4	10,031	15,960	6,384	7099	654.16	654.15	0.00	49	1,132	4	8,000	6,000	654.24
5	8,856	14,174	5,669	7093	654.24	654.30	0.00	49	1,098	5	8,000	5,000	654.35
6	15,683	12,673	5,069	5879	654.63	654.42	0.00	49	867	6	12,000	6,500	654.50
7	13,089	15,683	5,032	5550	654.94	654.69	0.00	49	809	7	12,000	5,500	655.00
8	13,792	11,945	4,778	5123	655.30	655.01	0.00	49	808	8	12,000	5,500	655.24
9	7,806	11,668	4,667	4812	655.41	655.33	0.00	49	874	9	5,000	4,000	655.50
10	7,156	11,381	4,552	5215	655.48	655.45	0.17	56	874	10	5,000	4,000	655.48
11	6,440	10,916	4,366	11387	655.26	655.42	0.00	56	1,828	11	4,000	4,000	655.48
12	6,286	10,403	4,161	5536	655.28	655.30	0.00	56	859	12	4,000	4,500	655.30
13	6,187	10,036	4,014	5615	655.29	655.32	0.00	56	849	13	4,000	5,000	655.40
14	5,100	8,679	3,500	4039	655.33	655.33	0.00	56	606	14	6,000	5,000	655.32
15	9,458	7,538	3,500	3845	655.55	655.48	1.85	56	594	15	8,000	5,000	655.55
16	17,191	6,919	3,500	5324	656.03	655.90	0.02	56	852	16	6,000	5,000	655.60
17	9,640	8,260	3,500	4,131	656.25	656.15	0.00	56	662	17	6,000	5,000	655.65
18	16,869	8,615	3,500	3,746	656.78	656.30	0.00	56	599	18	9,000	4,000	656.50
19	25,135	10,104	1,041	25,424	656.76	656.80	0.14	56	3,940	19	26,000	24,000	656.90
20	23,508	12,797	5,119	25,809	656.66	656.78	0.00	56	3,997	20	25,000	24,000	656.80
21	24,654	15,272	6,108	31,812	656.36	656.51	0.28	56	4,816	21	25,000	31,500	656.60
22	25,245	18,067	7,227	24,151	656.40	656.16	0.75	56	3,707	22	25,000	30,000	656.70
23	15,772	20,323	8,129	15,568	656.36	656.56	0.15	56	2,506	23	18,000	18,000	656.50
24	13,528	20,120	8,048	28,384	655.78	656.42	0.08	56	4,401	24	10,000	12,000	656.60
25	23,401	20,675	8,270	33,081	655.58	655.68	0.88	59	4,928	25	24,000	30,000	655.58
26	36,066	22,323	8,929	23,681	656.09	655.79	0.74	59	3,556	26	30,000	21,000	656.18
27	39,691	23,884	9,553	19,254	656.90	656.47	0.00	59	2,998	27	24,000	18,000	656.74
28	6,866	26,196	10,478	10,287	656.78	656.96	0.00	59	1,652	28	10,000	10,000	656.95
29	7,032	23,667	9,466	6,231	656.89	656.81	0.00	59	1,001	29	5,000	3,500	656.95
30	5,357	21,065	8,426	3,602	656.86	656.79	0.00	59	575	30	4,000	3,500	656.95
1	#####	19,592	4,898			656.86				1	4,000	3,500	656.95
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MO/YR

May

2011

OSAGEPLANTSTATISTIC

Total Inflow (with rain)	Inflow Avg Previous 7 Days 7DA	Prescribe d Minimum Flow	Osage Plant Discharge	Midnight Lake Elev.	7:00 AM Lake Elev.	Rain at Osage Plant	Surface Water Temperat ure F
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DATE

1	4,033	19,592	4898	3,600	656.86	656.86	0.05	59
2	3,899	18,221	4555	3,593	656.86	656.94	0.00	59
3	5,223	14,718	3,679	3,581	656.92	656.88	0.00	59
4	3,996	10,312	2,578	3,594	656.92	657.01	0.00	59
5	4,071	5,212	1,303	2,679	656.97	656.90	0.33	59
6	4,258	4,799	1,199	1,751	657.06	657.05	0.00	59
7	4,227	4,402	1,100	1,508	657.16	657.07	0.56	59
8	3,463	4,241	1,060	1,546	657.22	657.27	0.00	67
9	11,891	4,160	1,040	1,252	657.64	657.31	0.20	67
10	26,232	5,304	1,326	28,288	657.55	657.54	0.00	67
11	25,647	8,305	2,076	29,083	657.40	657.47	0.00	67
12	32,138	11,398	2,849	28,870	657.52	657.38	1.49	67
13	38,284	15,408	3,852	28,154	657.92	657.66	0.66	67
14	23,291	20,269	5,067	14,823	658.25	658.14	0.70	66
15	18,226	22,992	8,047	16,263	658.32	658.28	0.04	66
16		25,101	8,785			658.38		
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	Inflow Forecast	Outflow Forecast	Lake Level Forecast
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1	3,500	3,500	656.94
2	3,500	3,500	656.94
3	3,500	3,500	656.85
4	5,000	3,000	657.05
5	4,000	2,300	657.15
6	3,500	1,400	657.15
7	3,000	1,000	657.20
8	2,500	1,100	657.22
9	2,500	1,100	657.38
10	32,000	28,000	657.84
11	31,000	28,000	657.70
12	31,000	28,000	657.80
13	31,000	28,000	657.86
14	22,000	16,000	658.40
15	20,000	16,000	658.60
16	30,000	28,000	658.50
17	30,000	28,000	658.60
18	30,000	28,000	658.70
19	30,000	28,000	
20	30,000	28,000	
21	9,000	9,000	
22	9,000	9,000	
23	4,000	4,000	
24	4,000	4,000	
25	4,000	4,000	
26	4,000	4,000	
27	4,000	4,000	
28	4,000	4,000	
29	4,000	4,000	
30	4,000	4,000	
31	4,000	4,000	
1	4,000	4,000	
2	4,000	4,000	
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[REDACTED] NWO

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 6:55 AM
To: [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Dale - you set the date and time and we will make it happen.

Chuck - Is it possible for us to have two flat bottom boats so we could expedite this quickly? Also, on the day this is to happen if the wave action on the lake is down I would like us to do a surveillance from the water of the Dam riprap. Let me know if this is possible.

[REDACTED]
-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 10:11 AM
To: [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
Please coordinate this inspection with Dale. We will have to shut down all three tunnels in order to do this safely. They cannot be down very long at all so the inspection will have to move along very quickly. [REDACTED] please coordinate the releases with Water Management Division to ensure that we can make this happen?

[REDACTED]
-----Original Message-----

From: [REDACTED] NWO
Sent: Wednesday, May 11, 2011 10:39 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

[REDACTED]
Had a meeting this morning on the use of spillways/flood tunnels with Jody Farhat, Bertino, and a few others and as a group came to the consensus that we need to inspect all three regulatory tunnels roughly a month after we began releases to see how the cavitation repairs are holding up. Lets plan on an inspection sometime near the end of the month if that works for you guys, week of 29 May? From the way it sounds, discharges will be comparable (or possibly in excess) to those in 97 when the damaged occurred. Based on the inspection we may

need to restrict flows to certain tunnels, or may want to schedule another inspection at some interval to re-assess their condition.

[REDACTED] Will need someone assigned from structures to travel up to Garrison with us and evaluate the tunnels and cavitation repairs.

Jody: Figure you will want to make the trip as well

-----Original Message-----

From: [REDACTED] NWO
Sent: Wednesday, May 11, 2011 8:10 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
We are releasing out of all three tunnels. We'll be running about 20,000 cfs between the three by this weekend. We will be at these high flows through July. Currently no plans to stop and check them, but we'll get something scheduled in the future.

-----Original Message-----

From: [REDACTED] NWO
Sent: Monday, May 09, 2011 1:26 PM
To: [REDACTED] NWO
Subject: Regulatory Tunnel Releases

[REDACTED]
What are we currently releasing out of the regulatory tunnels. I believe I heard we are releasing out of all three? Is there a plan to stop releases and inspect the tunnels at some point? How long do we intent to release from them?

[REDACTED]
U.S. Army Corps of Engineers
Geotechnical Engineering & Sciences Branch, Soils Section B
Phone: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]@usace.army.mil

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

NWO

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 4:10 PM
To: Farhat, Jody S NWD02
Subject: RE: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

If we can't get the water to hit Lewis and Clark Lake, we may! I'm sure our water is having a long time making its way through the marsh and back-water areas.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Tuesday, May 17, 2011 4:02 PM
To: [REDACTED] NWO
Subject: RE: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] - thanks for the pictures. Puts meaning into the words "bank full", and then some. I just hope we don't have to go up any further.

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 3:53 PM
To: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] and [REDACTED] took a boat tour today downstream of the project. Here is the link to the branch shared drive with some pictures: (Branch_shared on 'Nwo-san1oma')

Fort Randall\Downstream_17May 2011 <[file:///\\Nwo-san1oma\BRANCH_SHARED\Fort%20Randall\Downstream 17May%202011](file:///\\Nwo-san1oma\BRANCH_SHARED\Fort%20Randall\Downstream%2017May%202011)>

Some overbank water at the upstream end of Lazy River. Hastings area is mostly under water. Hurds picnic/camping area is flooded as well as a bunch of farm pasture and crop land.

Tom

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 3:53 PM
To: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED]
Jody S NWD02; [REDACTED] NWD02
Subject: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] and [REDACTED] took a boat tour today downstream of the project. Here is the link to the branch shared drive with some pictures: (Branch_shared on 'Nwo-san1oma')

Fort Randall\Downstream_17May 2011 <[file:///\\Nwo-san1oma\BRANCH_SHARED\Fort%20Randall\Downstream 17May%202011](file:///\\Nwo-san1oma\BRANCH_SHARED\Fort%20Randall\Downstream%2017May%202011)>

Some overbank water at the upstream end of Lazy River. Hastings area is mostly under water. Hurds picnic/camping area is flooded as well as a bunch of farm pasture and crop land.

[REDACTED]

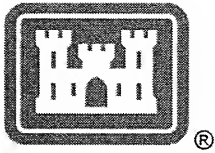
Classification: UNCLASSIFIED
Caveats: NONE

NWO

From: Quinn, Kevin R NWO
Sent: Tuesday, May 17, 2011 11:40 AM
To: [REDACTED] NWO; Farhat, Jody S NWD02; Thomas, Kimberly S NWO
Cc: Oldham, Margaret NWO
Subject: Riverwatch Daily #5 (UNCLASSIFIED)
Attachments: NR-RIVERWATCH5-11.No5docx.docx

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE



U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

NEWS RELEASE

For Immediate Release: July 1, 2011

Contact: Kevin R. Quinn 402-995-2419

kevin.r.quinn@usace.army.mil

Jody Farhat 402-996-3840

Riverwatch Daily – Garrison and Oahe Dams

Update #5

OMAHA, Neb. – Due to high runoff from the far-above-normal plains and mountain snowmelt, the U.S. Army Corps of Engineers is evacuating large volumes of water from Garrison Dam in Riverdale, N.D. and Oahe Dam near Pierre, S.D.

In expectation of continued high runoff, the U.S. Army Corps of Engineers will release a daily bulletin detailing releases and levels for both dams. Below are the May 17, 2011 statistics for the two dams:

Daily Information Update

Garrison Dam and Lake Sakakawea:

- Midnight reservoir level – 1849.5 feet mean sea level
- Yesterday's Reservoir Inflow – 68,000 cubic feet per second (cfs)
- Current Reservoir Release – 50,000 cfs
- Annual Flood control and multiple use zone – El. 1,837.5 to 1,850 msl
- Exclusive flood control zone– El. 1,850-1,854 msl
- Top of spillway gates - 1,854 feet msl
- 6 a.m. River Stage at Bismarck-12.9 feet (Flood stage at Bismarck-16.0 feet)
- Planned scheduled releases
 - Tuesday, May 17 hold 50,000 cfs
 - Wednesday, May 18: increase to 52,000 cfs at 8 a.m.
 - Thursday, May 19: hold 52,000 cfs

Oahe Dam and Lake:

- Midnight reservoir level – 1616.8 feet msl
- Yesterday's Reservoir Inflow – 48,000 cfs
- Yesterday's Reservoir Release – 41,200 cfs
- 6 am river stage at Pierre 9.8 feet (Flood stage 15.0)
- Annual Flood control and multiple use zone – El. 1607.5 to 1617.0 feet msl
- Exclusive flood control zone – El. 1617.0 to 1620.0 feet msl
- Top of spillway gates: - 1620.0 feet msl
- Planned scheduled releases:
 - Tuesday, May 17 through Friday, May 20: 57,000 cfs
 - Actual releases may not equal scheduled releases because Oahe is being used to follow power loads.

Garrison Dam is a 210-foot high rolled earth embankment. Discharges are normally passed through five power tunnels having a combined discharge capacity of 41,000 cfs, and three flood tunnels having a combined discharge capacity of 98,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with 28 tainter gates and has a maximum discharge capacity of 660,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will go through the power plant and regulating tunnels.

(more)

U.S. Army Corps of Engineers – Omaha District 1616 Capitol Ave., Omaha, Neb. 68102

<http://www.nwo.usace.army.mil/>

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[Type text]

Oahe Dam is a 245-foot high rolled earth embankment. Discharges are normally passed through seven power tunnels having a combined discharge capacity of 56,000 cfs, and six flood tunnels having a combined discharge capacity of 111,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with eight tainter gates and has a maximum discharge capacity of 80,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will be made through the power plant and outlet tunnels.

Daily bulletin updates are available from the Corps' website: <http://www.nwo.usace.army.mil/>

Northwestern Division's water management website for the most up to date information:
<http://www.nwd-mr.usace.army.mil/rcc/index.html>

U.S. Army Corps of Engineers Contact: Jody Farhat, Chief, Missouri River Basin Water Management 402-996-3840

###

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 10:46 AM
To: Farhat, Jody S NWD02
Subject: Re: Garrison Releases (UNCLASSIFIED)

Jody,

I talked with Scott Bachmeier earlier this morning and he wants top have me on tomorrow, so you can defer questions that I'll need to answer.

I will try to listen to today's show, if there's something I can assist with I'll send you a text.

[REDACTED]
[REDACTED]

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: Farhat, Jody S NWD02
To: [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO
Cc: [REDACTED] NWD02
Sent: Tue May 17 09:37:03 2011
Subject: RE: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] - The releases referenced are correct and you're right that the releases are additive and that the total is 139,000 cfs.

Our latest summary of engineering data shows a powerplant release capacity of 41,000 cfs. Older versions show 38,000 cfs.

As for the flows not adding up, it's just the way it is. The flows at Bismarck could certainly be off. The releases from Garrison could also be off, as could the calculation of inflows at Oahe. It's not like weighing cannon balls, these are all estimates. I do agree that at this time Bismarck seems like the likely culprit and a measurement could confirm that. I think the plan was to wait until we get to our steady release and take a measurement then.

Any word on your participation this afternoon?

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Monday, May 16, 2011 8:43 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO
Subject: FW: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

All,

Reference the questions below regarding our current "River Watch" bulletin. I believe the answer to the first question is as follows:

-Yes the cfs through the power plant and the regulating tunnels are additive, i.e. we could discharge 139,000 cfs with the plant and regulating tunnels at full capacity. Is this correct?

- I'm also wondering if the figure for capacity through the power plant is correct? We say it's 41,000 cfs in River Watch, but it's listed at 38,000 cfs in the Summary of Engineering Data. Has this been updated based on the new turbines?

- Regarding the second question about discharges from Garrison, plus contributions from the tributaries not equaling what the river gage at Bismarck is showing, or the inflows into Oahe, is confusing. Per conversation with [REDACTED] (NWO) this morning, he too feels like the flows for the gage at Bismarck are too high. I believe he was going to have USGS take a measurement on this?

Please verify the combined discharges through the powerplant and regulating tunnels. If you have any additional information regarding the river gage flows at Bismarck, that too would be much appreciated.

-----Original Message-----

From: Michael Gunsch [mailto:mgunsch@houstoneng.com]

Sent: Monday, May 16, 2011 3:28 PM

To: [REDACTED] NWO

Cc: Gailen Narum (gailen.narum@narumfamily.com); Fleck Terry (tfleck@attitudedr.com)

Subject: Garrison Releases

Several questions have arisen regarding the daily report:

1. The capacity of the spillway is noted at 98,000 cfs (5 tunnels) and the power at 41,000 cfs.

Interesting as I was always of the understanding that the power was 40,000 cfs and the flood tubes were an additional 20,000 cfs for a total of 60,000 cfs? And certainly the total capacity is not $41+98 = 139K$ as someone might read this. Can you clarify - is the 98,000 cfs total with the power tunnels by passed or not generating? There is a need to know with questions being asked.

2. The USGS gage at Bismarck is indicating flows of over 55,200 cfs (today) and only 48,000 cfs is reported as inflows to Oahe. The inflows to Sak are high and falling, which is good, but the reporting at Oahe seems confusing and not in step with what is being recorded. There is also 810 cfs from the Heart River and 692 cfs from the Cannonball that is not recorded at Bismarck so that makes the number even larger at Oahe - what is the scoop?

Any update you can provide would be appreciated ---

Michael H. Gunsch, PE, Principal / Project Manager

3712 Lockport Street

Bismarck, ND 58503

Phone (701) 323-0200

Cell (701) 527-2134

Fax (701) 323-0300

e-mail mgunsch@houstoneng.com<<mailto:mgunsch@houstoneng.com>>

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Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 9:18 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWO; Farhat, Jody S NWD02
Subject: FW: Question (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]
[REDACTED] ([REDACTED]) is the water control manager for the Corps N. Platte and S. Platte projects and coordinates with the Lake McConaughy staff. She will contact you and can answer questions regarding releases.

Thanks,
[REDACTED]

-----Original Message-----

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 8:39 AM
To: [REDACTED] NWO
Subject: FW: Question (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Do you know about the water releases into the Platte River!

Ms. [REDACTED], [REDACTED] // US Army Corps of Engineers - Wehrspann Field Office // 8901 South 154 St Ste 1 Omaha, NE 68138-3621 // [REDACTED] / [REDACTED]
Permit Application : <http://www.usace.army.mil/CECW/> [[Problem with Security Certificate - press RED X "Continue to this website; ignore (not recommended)"]]

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Tuesday, May 17, 2011 8:33 AM
To: [REDACTED] W NWO
Cc: [REDACTED] NWO
Subject: RE: Question (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Someone in [REDACTED] office can answer your questions regarding the Platte River or they can put you in touch with the proper folks at McConaughy.

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 7:37 AM

To: Farhat, Jody S NWD02
Subject: Question (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I have been getting a lot of calls about water release to the Platte River. Do you know who controls this and who they can call? I believe it is Lake McConaughy. I appreciate your help.

[REDACTED], [REDACTED] // US Army Corps of Engineers - Wehrspann Field Office // 8901 South 154 St Ste 1 Omaha, NE 68138-3621 // [REDACTED] / Fax [REDACTED]
Permit Application : <http://www.usace.army.mil/CECW/> <<https://www.nwo.usace.army.mil/html/od-rne/applications.html>> [[Problem with Security Certificate - press RED X "Continue to this website; ignore (not recommended)"]]

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Wednesday, May 18, 2011 6:02 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: FW: Garrison Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
This is simply FYI. We are attempting to meet Engineering Divisions requests for inspections of our regulating tunnels, yet keep moving water and minimize impacts. It sounds like they (ED) was OK with the inspection we performed today, but they may want us to do it again in a few weeks. I think this is the best course of action for now. My hope is that we will not have to do a complete shutdown of all three tunnels to perform more detailed inspections, but that will likely be dictated by what our current inspections prove? We'll keep you posted of any changes...

P.S. [REDACTED], "Thanks" for the alternate plan. Shutting down all three tunnels, and waiting for the tailrace elevation to drop so we could boat in for an inspection would have been a significant impact. I completely forgot about the time delay in letting the tailrace drop. This would have required a significantly longer outage of the regulating tunnels...

-----Original Message-----

From: [REDACTED] NWO
Sent: Wednesday, May 18, 2011 5:52 PM
To: [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED],
As discussed earlier today, Plant Mechanics inspected the three regulating tunnels at Garrison for signs of cavitation caused by the recent water releases. The inspections were conducted from the gate well landing directly above the top of each gate. Approximately three to four feet of water was present in the tunnels. No areas of cavitation were observed.

Boat access to the tunnels for the inspections would have required the regulating gates to be closed for a fair amount of time. Due to the need to move water, concerns regarding the sloughing of the river banks, and the wave of water created when the gates were re-opened, the option to inspect the tunnels from the gate wells appeared to be the best option.

The inspections of the three tunnels took approximately six hours to complete. If you would like additional inspections in the future, please let us know.

-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 11:18 AM
To: [REDACTED]; [REDACTED] NWO; [REDACTED] NWO
Subject: FW: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Please ensure that this inspection is set up to run efficiently and quickly. I do not want the inspectors dily-dallying. We need to keep the down time to a very minimum for a couple of reasons. First, we need to move water. Second, we want to minimize the stage reduction on the river as it will induce erosion, i.e. the banks will be more likely to collapse from a rapid draw down...

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Saturday, May 14, 2011 11:15 AM
To: [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

That would be even better.

-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 10:58 AM
To: Farhat, Jody S NWD02
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Thanks Jody,
I see no reason they can't complete the inspection in closer to a 4 hour timeframe.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Saturday, May 14, 2011 10:48 AM
To: [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] - we agreed to help make this happen. They thought all three tunnels could be inspected in no more than 8 hours. It'll create a dip in the river and will probably induce bank erosion complaints, but Bertino and others thought it was very important to verify the status of the repairs. Apparently all the repairs were not done at the same time or by the same contractor (I know I'm telling you things you already know) so they wanted to see if there was a difference in the performance of the tunnels.

BTW, this was a bit of an impromptu meeting with Bertino so we could provide him our latest forecast and his staff (primarily dam safety folks) could tell us of any concerns they had.

We will be meeting with them every couple weeks as the situation develops and next time we'll set up a conference call line so that you and other ops managers as well as Engineering folks in Portland can call in.

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 10:11 AM
To: [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED]
Please coordinate this inspection with [REDACTED]. We will have to shut down all three tunnels in order to do this safely. They cannot be down very long at all so the inspection will have to move along very quickly. [REDACTED] please coordinate the releases with Water Management Division to ensure that we can make this happen?

-----Original Message-----

From: [REDACTED] NWO
Sent: Wednesday, May 11, 2011 10:39 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

[REDACTED],
Had a meeting this morning on the use of spillways/flood tunnels with Jody Farhat, Bertino, and a few others and as a group came to the consensus that we need to inspect all three regulatory tunnels roughly a month after we began releases to see how the cavitation repairs are holding up. Lets plan on an inspection sometime near the end of the month if that works for you guys, week of 29 May? From the way it sounds, discharges will be comparable (or possibly in excess) to those in 97 when the damaged occurred. Based on the inspection we may need to restrict flows to certain tunnels, or may want to schedule another inspection at some interval to re-assess their condition.

[REDACTED] Will need someone assigned from structures to travel up to Garrison with us and evaluate the tunnels and cavitation repairs.

Jody: Figure you will want to make the trip as well

-----Original Message-----

From: [REDACTED] NWO
Sent: Wednesday, May 11, 2011 8:10 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: RE: Regulatory Tunnel Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED]
We are releasing out of all three tunnels. We'll be running about 20,000 cfs between the three by this weekend. We will be at these high flows through July. Currently no plans to stop and check them, but we'll get something scheduled in the future.
[REDACTED]

-----Original Message-----

From: [REDACTED] NWO
Sent: Monday, May 09, 2011 1:26 PM
To: [REDACTED] NWO
Subject: Regulatory Tunnel Releases

[REDACTED]
What are we currently releasing out of the regulatory tunnels. I believe I heard we are releasing out of all three? Is there a plan to stop releases and inspect the tunnels at some point? How long do we intent to release from them?

[REDACTED]
U.S. Army Corps of Engineers
Geotechnical Engineering & Sciences Branch, Soils Section B
Phone: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]@usace.army.mil

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Wednesday, May 18, 2011 5:53 PM
To: Farhat, Jody S NWD02
Subject: More Questions (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
I hate to burden you with additional questions, but as I learn the answers I can respond to them in the future.

The SWC called me this afternoon and asked me about Oahe Inflows verses the Bismarck Gage? We show 47,000 inflows into Oahe in River Watch verses 58,000 cfs at the Bismarck gage? Can we explain the discrepancy? I'd have thought that Oahe inflows would exceed the Bismarck gage, when considering the other trib's into Oahe.

Also, my staff has asked me about this twice now. The Daily Bulletin posted on the web, shows a higher discharge from Garrison, than our daily average. As an example, today's Daily Bulletin showed Garrison discharges at 55,160 cfs, verses our daily average of 52,000 cfs. At first I thought this may be attributable to our "variance" that we are allowing WAPA, but I visited with [REDACTED] about our production order and he indicated that we are only allowed to under run by 1,500 cfs and that we were running very close to the 52,000 cfs. Can you educate me on this issue, please?

Lastly, following my interview with KFYZ today, someone called in and asked if we were going to reduce releases from Garrison if we get the heavy rains that are forecasted? I thought about this during today's call with the EM's and was surprised that nobody asked that question. I think this is something we should be prepared to discuss during Friday's call...

Again, I don't want to overburden you with questions. My hope is that once I understand some of this better I can provide answers and you won't have to deal with them.

[REDACTED]
[REDACTED]
[REDACTED]
Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Wednesday, May 18, 2011 4:57 PM
To: [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02
Subject: FW: Media (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

All,
Reference my message below regarding media inquiries this week at Garrison. If the ASA releases her decision on water storage contracts this week, as we've heard from one stakeholder who spoke with the Governor's office, we will need additional help dealing with the media!

There are lots of "rumors" floating out there. I hope we're making progress in getting the right information to the public with all the media contacts. Jody, I appreciate your assistance on the water management issues.

[REDACTED]
-----Original Message-----

From: [REDACTED] NWO
Sent: Wednesday, May 18, 2011 4:52 PM
To: DLL-CENWO-OD-GA
Subject: Media (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

All,
There has been a significant number of media inquiries associated with water management. Following last week's controversial meeting that the State hosted regarding our releases, I did an interview with the Bismarck Tribune. I know that KXMC news visited the project yesterday, while I was in Williston. I believe that [REDACTED] visited with them.

FYI, we are trying to get the "facts" out to the public. We are utilizing the daily "River Watch" bulletin, and Jody Farhat participated in a call-in radio show on KFYZ, yesterday afternoon, to explain how we manage the Missouri River system. I did an interview with the Minot Daily this morning and the call-in radio show with KFYZ this afternoon. I just returned a call to KXMC and have another interview with the Tribune tomorrow. I know that all of you have plenty to do so feel free to refer the media and inquiries from the public to me. If you really want some camera time, just let me know. I'm more than willing to share, and I think there are going to be plenty of opportunities this summer!

If you are not comfortable answering questions, or cannot respond immediately just take a message and let them know that we will get back to them as soon as possible. We can utilize the media as an ally but we can't always meet their terms. I'll work those issues...

[REDACTED]
[REDACTED]
Garrison Project

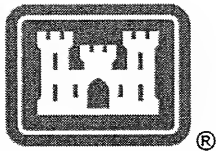
[REDACTED] NWO

From: Quinn, Kevin R NWO
Sent: Wednesday, May 18, 2011 10:39 AM.
To: [REDACTED] NWO; Farhat, Jody S NWD02; Thomas, Kimberly S NWO
Cc: Oldham, Margaret NWO
Subject: Riverwatch Daily #6 (UNCLASSIFIED)
Attachments: NR-RIVERWATCH5-11.No6docx.docx

Classification: UNCLASSIFIED
Caveats: NONE

Here tis...

Classification: UNCLASSIFIED
Caveats: NONE



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U.S. ARMY CORPS OF ENGINEERS

NEWS RELEASE

For Immediate Release: July 1, 2011

Contact: Kevin R. Quinn 402-995-2419

kevin.r.quinn@usace.army.mil

Jody Farhat 402-996-3840

Riverwatch Daily – Garrison and Oahe Dams

Update #6

OMAHA, Neb. – Due to high runoff from the far-above-normal plains and mountain snowmelt, the U.S. Army Corps of Engineers is evacuating large volumes of water from Garrison Dam in Riverdale, N.D. and Oahe Dam near Pierre, S.D.

In expectation of continued high runoff, the U.S. Army Corps of Engineers will release a daily bulletin detailing releases and levels for both dams. Below are the May 18, 2011 statistics for the two dams:

Daily Information Update

Garrison Dam and Lake Sakakawea:

- Midnight reservoir level – 1849.5 feet mean sea level
- Yesterday's Reservoir Inflow – 69,000 cubic feet per second (cfs)
- Current Reservoir Release – 52,000 cfs
- Annual Flood control and multiple use zone – El. 1,837.5 to 1,850 msl
- Exclusive flood control zone – El. 1,850-1,854 msl
- Top of spillway gates - 1,854 feet msl
- 6 a.m. River Stage at Bismarck-13.0 feet (Flood stage at Bismarck-16.0 feet)
- Planned scheduled releases
 - Wednesday, May 18: increase to 52,000 cfs at 8 a.m.
 - Thursday, May 19: hold 52,000 cfs
 - Friday May 20 increase to 54,000 cfs at 8 a.m.

Oahe Dam and Lake:

- Midnight reservoir level – 1616.9 feet msl
- Yesterday's Reservoir Inflow – 47,000 cfs
- Yesterday's Reservoir Release – 46,100 cfs
- 6 am river stage at Pierre 11.2 feet (Flood stage 15.0)
- Annual Flood control and multiple use zone – El. 1607.5 to 1617.0 feet msl
- Exclusive flood control zone – El. 1617.0 to 1620.0 feet msl
- Top of spillway gates: - 1620.0 feet msl
- Planned scheduled releases:
 - Tuesday, May 17 through Friday, May 20: 57,000 cfs
 - Actual releases may not equal scheduled releases because Oahe is being used to follow power loads.

Garrison Dam is a 210-foot high rolled earth embankment. Discharges are normally passed through five power tunnels having a combined discharge capacity of 41,000 cfs, and three flood tunnels having a combined discharge capacity of 98,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with 28 tainter gates and has a maximum discharge capacity of 660,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will go through the power plant and regulating tunnels.

(more)

U.S. Army Corps of Engineers – Omaha District 1616 Capitol Ave., Omaha, Neb. 68102

<http://www.nwo.usace.army.mil/>

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[Type text]

Oahe Dam is a 245-foot high rolled earth embankment. Discharges are normally passed through seven power tunnels having a combined discharge capacity of 56,000 cfs, and six flood tunnels having a combined discharge capacity of 111,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with eight tainter gates and has a maximum discharge capacity of 80,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will be made through the power plant and outlet tunnels.

Daily bulletin updates are available from the Corps' website: <http://www.nwo.usace.army.mil/>

Northwestern Division's water management website for the most up to date information:
<http://www.nwd-mr.usace.army.mil/rcc/index.html>

U.S. Army Corps of Engineers Contact: Jody Farhat, Chief, Missouri River Basin Water Management 402-996-3840

###

NWO

From: Farhat, Jody S NWD02
Sent: Wednesday, May 18, 2011 7:01 PM
To: **NWO**
Subject: Re: More Questions (UNCLASSIFIED)

Since I'm on my bb, these are the short answers. We can discuss the details tomorrow.

Flow estimates are never very accurate. I suspect the Bismarck gage is reporting several 1000 more cfs than is actually there. The Oahe inflow calculations are also very rough. We basically look at the 24 hourly pool elevations and pick the elevation that we best think represents the midnight pool elevation. Then knowing the pool elevation we determine the storage change for the previous 24 hours and then calculate the inflow based on the equation that $\text{inflow} - \text{outflow} = \text{storage change}$. We also work estimated depletions, rain, wind, and evap into the basic equation. But none of those numbers is exact, so it's really just an estimate of inflow.

On the daily bulletin I've been inputting the actual release rate at the time of the bulletin rather than the previous day's release so that folks see the 2000 cfs increase every other day rather than daily averages which would make it appear we're going up every day. If you want, I can use previous day's actual but I thought this would result in fewer questions.

And lastly we will consider cutting back but only for a big event and only if the cut back can improve the situation downstream. Like I always tell the downstream folks, we've got a large volume of water to release and every time we cut backs means that when we start back up it will have to be at a higher rate. This is especially true now since the pool is rising and we have all that snow left to come. Once the pool has crested, is on its way back down and is well away from exclusive we'll have more flexibility to cut back for local events.

I was surprised no one asked on the call today too. The NWS guy brushed on the subject (which I thought was a bit out of line for him) but no one took the bait.

Hope this answers some of the questions. We can talk more tomorrow.

Jody

----- Original Message -----

From: **NWO**
To: Farhat, Jody S NWD02
Sent: Wed May 18 17:53:15 2011
Subject: More Questions (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,

I hate to burden you with additional questions, but as I learn the answers I can respond to them in the future.

The SWC called me this afternoon and asked me about Oahe Inflows verses the Bismarck Gage? We show 47,000 inflows into Oahe in River Watch verses 58,000 cfs at the Bismarck gage? Can we explain the discrepancy? I'd have thought that Oahe inflows would exceed the Bismarck gage, when considering the other trib's into Oahe.

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Lastly, following my interview with KFYZ today, someone called in and asked if we were going to reduce releases from Garrison if we get the heavy rains that are forecasted? I thought about this during today's call with the EM's and was surprised that nobody asked that question. I think this is something we should be prepared to discuss during Friday's call...

Again, I don't want to overburden you with questions. My hope is that once I understand some of this better I can provide answers and you won't have to deal with them.

[REDACTED]
[REDACTED]
Operations Project Manager
Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO

NWO

From: Farhat, Jody S NWD02
Sent: Thursday, May 19, 2011 6:18 AM
To: [REDACTED] NWO
Subject: Re: More Questions (UNCLASSIFIED)

Todd - one thing we could mull over is to hold off on the last two increases until next week, ie. hold the current 52 thru the weekend. We could talk to the state and see what they think - whether their concern for Bismarck is enough to put a little extra water in the reservoir.

Jody

----- Original Message -----

From: Farhat, Jody S NWD02
To: [REDACTED] NWO
Sent: Wed May 18 19:00:53 2011
Subject: Re: More Questions (UNCLASSIFIED)

[REDACTED]

Since I'm on my bb, these are the short answers. We can discuss the details tomorrow.

Flow estimates are never very accurate. I suspect the bismarck gage is reporting several 1000 more cfs than is actually there. The Oahe inflow calculations are also very rough. We basically look at the 24 hourly pool elevations and pick the elevation that we best think represents the midnight pool elevation. Then knowing the pool elevation we determine the storage change for the previous 24 hours and then calculate the inflow based on the equation that $\text{inflow} - \text{outflow} = \text{storage change}$. We also work estimated depletions, rain, wind, and evap into the basic equation. But none of those numbers is exact, so it's really just an estimate of inflow.

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Hope this answers some of the questions. We can talk more tomorrow.

Jody

----- Original Message -----

From: [REDACTED] NWO
To: Farhat, Jody S NWD02
Sent: Wed May 18 17:53:15 2011
Subject: More Questions (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

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Operations Project Manager
Garrison Project

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 4:24 PM
To: Farhat, Jody S NWD02
Subject: RE: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody:

Thanks for the compliment. I passed your email onto our staff. I'm sure they will appreciate it. All of you have been very good to work with.

[REDACTED]
-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 19, 2011 2:59 PM
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO;
[REDACTED] NWO
Cc: Cu [REDACTED] NWO
Subject: FW: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

See link below for pictures from Tom of the reach downstream of Fort Randall. Unfortunately conditions like this will probably be the norm from Montana to Missouri this year.

Thanks for your hard work and all the extra things you're doing for us to ensure we can manage the system in the best way possible. I appreciate all you are doing.

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Tuesday, May 17, 2011 3:53 PM
To: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: Pictures - Fort Randall Downstream High Water impacts 17May2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Cody and I took a boat tour today downstream of the project. Here is the link to the branch shared drive with some pictures: (Branch_shared on 'Nwo-san1oma')

Fort Randall\Downstream_17May 2011 <[file:///\\Nwo-san1oma\BRANCH_SHARED\Fort%20Randall\Downstream 17May%202011](file:///\\Nwo-san1oma\BRANCH_SHARED\Fort%20Randall\Downstream%2017May%202011)>

Some overbank water at the upstream end of Lazy River. Hastings area is mostly under water. Hurds picnic/camping area is flooded as well as a bunch of farm pasture and crop land.

Tom

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 3:45 PM
To: Farhat, Jody S NWD02
Subject: Re: Meeting next Monday or Wed (UNCLASSIFIED)

I'm good all day.

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: Farhat, Jody S NWD02
To: [REDACTED] NWO; Bertino, John J Jr NWO
Sent: Thu May 19 15:39:44 2011
Subject: RE: Meeting next Monday or Wed (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

An hour on Wednesday would work. Is there a particular one you prefer? We could even schedule it over lunch.

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 2:25 PM
To: Bertino, John J Jr NWO; Farhat, Jody S NWD02
Subject: RE: Meeting next Monday or Wed (UNCLASSIFIED)

I am not in on Monday and am good all day Wednesday.

-----Original Message-----

From: Bertino, John J Jr NWO
Sent: Thursday, May 19, 2011 2:03 PM
To: Farhat, Jody S NWD02; [REDACTED] NWO
Subject: Re: Meeting next Monday or Wed (UNCLASSIFIED)

Jody,

I may be going to North Platte and then to Cheyenne on Monday. Tuesday and Wednesday I have the AE in giving me the final ot briefs on our Period Levee Inspections do with ARRA funding. So I won't be able to attend unless we hold it to no more than an hour and I step out of the out briefs.

----- Original Message -----

From: Farhat, Jody S NWD02
To: Bertino, John J Jr NWO; [REDACTED] NWO
Sent: Thu May 19 13:52:53 2011
Subject: Meeting next Monday or Wed (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

John and [REDACTED]

Would the two of you be available for a meeting next Monday or Wednesday to discuss the operation of the mainstem system this summer? I'd like to have the Ops managers and several NWD folks on the line to ensure we're all singing off the same sheet of music and are addressing any concerns as they arise.

Please let me know of your availability.

Thanks,
Jody

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 2:26 PM
To: Farhat, Jody S NWD02
Subject: Daily Bulletin? (UNCLASSIFIED)
Attachments: Di450_1105191316.PDF

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
I apologize if I am not using the right terminology! The attached "daily bulletin" is what my staff is pulling off the website. They are asking why the Garrison discharges are running higher than what we say we're releasing?
[REDACTED]

Classification: UNCLASSIFIED
Caveats: FOUO

MISSOURI RIVER REGION, CORPS OF ENGINEERS
RESERVOIR CONTROL CENTER

MISSOURI RIVER BASIN

PROJECT DATA: 18 MAY. 2011

PROJECT	PROJECT INFORMATION				CURRENT DATA				OCCUPIED STORAGE				
	ELEVATIONS		STORAGE TOTAL		ELEV.	ELEV.	STORAGE	INFLOW	DISCH.	PREC.	MP	FC	FC
	(MSL)	(1000 AC-FT)			(MSL)	CHNG.	(AC-FT)	(DSF)	(DSF)	IN.	PCT	AC-FT	PCT
	MP	FC	MP	FC									
MISSOURI RIVER BASIN - MAIN STEM													
FORT PECK	2234.0	2250.0	14788	18463	2242.60	0.16	16690000	41000.	19700	0.77	100.0	1901660	51.8
GARRISON	1837.5	1854.0	18103	23811	1849.52	0.06	22118000	69000.	57660	0.00	100.0	4015455	70.3
OAHE	1607.5	1620.0	18827	23128	1616.95	0.13	21989000	47000.	46380	0.00	100.0	3162317	73.5
BIG BEND	1420.0	1423.0	1621	1798	1420.00	-0.20	1623000	42000.	46800.	0.00	100.0	2149	1.2
FORT RANDALL	1350.0	1375.0	3123	5416	1355.09	-0.17	3538000	50000.	57200.	0.00	100.0	414853	18.1
GAVINS POINT	1204.5	1210.0	307	450	1205.68	0.05	335000	57000.	56600.	0.00	100.0	27505	19.3
(U S BUREAU OF RECLAMATION TRIBUTARY RESERVOIRS)													
TIBER	2993.0	3012.5	967	1368	2984.88	0.13	790019	3422.	2447.	0.00	81.7	0	0.0
CLARK CANYON	5546.1	5560.4	174	253	5544.84	0.04	167918	454.	352.	0.00	96.3	0	0.0
CANYON FERRY	3797.0	3800.0	1951	2051	3778.38	0.07	1313496	12815.	11841.	0.00	67.3	0	0.0
BOYSEN	4725.0	4732.2	741	892	4709.98	-0.25	492561	739.	2414.	0.03	66.4	0	0.0
BUFFALO BILL	5393.5	5393.5	644	644	5347.80	-0.09	324258	3232.	3502.	0.00	50.4	0	0.0
YELLOWTAIL	3640.0	3657.0	1070	-9002	3607.18	-0.25	748040	6717.	7414.	0.00	69.9	0	0.0
JAMESTOWN	1429.8	1454.0	29	221	1449.85	-0.16	169347	598.	1592.	0.00	100.0	140453	73.2
HEART BUTTE	2064.5	2094.5	76	224	2064.40	-0.21	66812	285.	635.	0.00	88.2	0	0.0
KEYHOLE	4099.3	4111.5	194	334	4093.61	-0.03	140540	-113.	0.	0.00	72.6	0	0.0
PACTOLA	4580.2	4621.5	56	99	4579.89	0.02	55709	93.	84.	0.12	99.6	0	0.0
SHADEHILL	2271.9	2302.0	120	-9002	2271.57	0.05	118027	230.	105.	0.00	98.7	0	0.0
GLEND	4635.0	4653.0	517	789	4628.66	0.13	444610	6767.	6040.	0.00	86.0	0	0.0
(OMAHA DIST CORPS OF ENGINEERS TRIBUTARY PROJECTS)													
BOWMAN HALEY	2754.8	2777.0	19	91	2755.09	-0.05	19260	-19.	29.	1.91	100.0	502	0.7
PIPESTEM	1442.4	1496.3	9	142	1486.37	0.07	101466	375.	204.	3.76	100.0	92609	69.5
CHATFIELD	5432.0	5500.0	27	234	5431.40	0.08	26565	53.	0.	0.00	96.9	0	0.0
CHERRY CREEK	5550.0	5598.0	13	92	5549.95	0.02	12757	29.	16.	0.00	99.7	0	0.0
BEAR CREEK	5558.0	5635.5	2	31	5558.41	0.05	1925	18.	26.	0.00	100.0	44	0.2
PAPIO #11	1121.0	1142.0	3	17	1121.37	-0.02	3199	0.	0.	50.03	100.0	146	1.1
PAPIO #16	1104.0	1121.0	1	5	1104.48	-0.07	1272	0.	0.	4.29	100.0	61	1.7
PAPIO #18	1110.0	1128.2	3	11	1092.50	0.00	281	0.	0.	0.00	9.6	0	0.0
PAPIO #20	1095.8	1113.1	3	9	1096.20	-0.06	2623	0.	0.	44.01	100.0	97	1.6
(KANSAS CITY DISTRICT PROJECTS)													
BONNY	3672.0	3710.0	41	170	3654.85	0.00	15.	4.	0.00	0.00	0	0.0	0.0
SWANSON	2752.0	2773.0	112	246	2744.35	0.06	150.	1.	0.48	0.00	0	0.0	0.0
ENDERS	3112.3	3127.0	43	73	3093.96	0.01	25.	5.	0.12	0.00	0	0.0	0.0
HUGH BUTLER	2581.8	2604.9	36	85	2554.88	0.14	60.	4.	0.69	0.00	0	0.0	0.0
HARRY STRUNK	2366.1	2386.2	35	87	2367.10	0.04	110.	60.	0.78	0.00	0	0.0	0.0
NORTON	2304.3	2331.4	35	134	2297.59	-0.02	20.	0.	0.05	0.00	0	0.0	0.0
HARLAN COUNTY	1946.0	1973.5	318	814	1946.53	0.06	500.	50.	0.78	0.00	0	0.0	0.0
LOVEWELL	1582.6	1595.3	-9002	-9002	1582.12	0.08	34324	130.	0.	0.00	0	0.0	0.0
MILFORD	1144.4	1176.2	389	1146	1144.58	-0.02	391732	325.	400.	0.10	100.0	2916	0.4
(LOWER KANSAS RIVER BASIN)													
CEDAR BLUFF	2144.0	2166.0	-9002	-9002	2128.92	-0.03	89548	20.	0.	0.00	0	0.0	0.0
KANOPOLIS	1463.0	1508.0	49	419	1463.97	-0.02	30.	18.	0.00	0.00	0	0.0	0.0
WILSON	1516.0	1554.0	243	773	1515.63	-0.03	239258	25.	15.	0.00	98.7	0	0.0
KIRWIN	1729.3	1757.3	-9002	-9002	1729.31	0.01	98502	65.	0.	0.22	0	0.0	0.0
WEBSTER	1892.5	1923.7	-9002	-9002	1891.06	0.00	71037	20.	0.	0.00	0	0.0	0.0
WACONDA	1455.6	1488.3	-9002	-9002	1452.15	0.02	178835	200.	50.	0.23	0	0.0	0.0
TUTTLE CREEK	1075.0	1136.0	280	2151	1075.31	0.16	1600.	500.	0.00	0.00	0	0.0	0.0
PERRY	891.5	920.6	207	723	891.76	0.03	50.	25.	0.00	0.00	0	0.0	0.0
CLINTON	875.5	903.4	125	394	875.75	-0.02	20.	21.	0.00	0.00	0	0.0	0.0
(METRO - KANSAS CITY AREA)													
BLUE SPRINGS	802.0	820.3	11	27	802.50	-0.03	20.	24.	0.00	0.00	0	0.0	0.0
LONGVIEW	891.0	909.0	22	47	891.32	-0.04	10.	19.	0.00	0.00	0	0.0	0.0
SMITHVILLE	864.2	876.2	142	244	863.98	0.00	10.	8.	0.00	0.00	0	0.0	0.0
(CHARITON RIVER BASIN)													
RATHBUN	904.0	926.0	222	571	905.83	0.02	300.	300.	0.00	0.00	0	0.0	0.0
LONG BRANCH	791.0	801.0	34	65	791.90	-0.05	45.	100.	0.00	0.00	0	0.0	0.0
(OSAGE RIVER BASIN)													
POMONA	974.0	1003.0	64	240	974.36	-0.04	10.	15.	0.00	0.00	0	0.0	0.0
MELVERN	1036.0	1057.0	152	360	1036.27	-0.03	15.	20.	0.00	0.00	0	0.0	0.0
HILLSDALE	917.0	931.0	76	160	917.53	-0.04	10.	24.	0.00	0.00	0	0.0	0.0
POMME DE TERRE	839.0	874.0	237	644	844.38	-0.63	300.	3156.	0.00	0.00	0	0.0	0.0
STOCKTON	867.0	892.0	875	1651	872.64	-0.29	1000.	4931.	0.00	0.00	0	0.0	0.0
HARRY S TRUMAN	706.0	739.6	1181	5190	710.84	-0.64	11000.	30157.	0.00	0.00	0	0.0	0.0
BAGWELL	660.0	665.0	-9002	-9002	658.91	0.00	1864249	30819.	20893.	0.00	0.00	0	0.0

Ask Jody about releases.

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 2:25 PM
To: Bertino, John J Jr NWO; Farhat, Jody S NWD02
Subject: RE: Meeting next Monday or Wed (UNCLASSIFIED)

I am not in on Monday and am good all day Wednesday.

-----Original Message-----

From: Bertino, John J Jr NWO
Sent: Thursday, May 19, 2011 2:03 PM
To: Farhat, Jody S NWD02; [REDACTED] NWO
Subject: Re: Meeting next Monday or Wed (UNCLASSIFIED)

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Classification: UNCLASSIFIED

Caveats: NONE

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Thanks,
Jody

Classification: UNCLASSIFIED

Caveats: NONE

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Thanks,
Jody

Classification: UNCLASSIFIED
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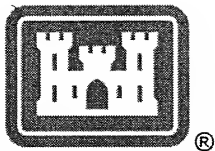
[REDACTED] NWO

From: Quinn, Kevin R NWO
Sent: Thursday, May 19, 2011 1:36 PM
To: Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED]; [REDACTED] NWO
Cc: Oldham, Margaret NWO
Subject: RE: Today's ND Update (UNCLASSIFIED)
Attachments: NR-RIVERWATCH5-11.No7docx.docx

Classification: UNCLASSIFIED
Caveats: NONE

01' number 7 comin' at ya...

Classification: UNCLASSIFIED
Caveats: NONE



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U.S. ARMY CORPS OF ENGINEERS

NEWS RELEASE

For Immediate Release: July 1, 2011

Contact: Kevin R. Quinn 402-995-2419

kevin.r.quinn@usace.army.mil

Jody Farhat 402-996-3840

Riverwatch Daily – Garrison and Oahe Dams

Update #7

OMAHA, Neb. – Due to high runoff from the far-above-normal plains and mountain snowmelt, the U.S. Army Corps of Engineers is evacuating large volumes of water from Garrison Dam in Riverdale, N.D. and Oahe Dam near Pierre, S.D.

In expectation of continued high runoff, the U.S. Army Corps of Engineers will release a daily bulletin detailing releases and levels for both dams. Below are the May 19, 2011 statistics for the two dams:

Daily Information Update

Garrison Dam and Lake Sakakawea:

- Midnight reservoir level – 1849.6 feet mean sea level
- Yesterday's Reservoir Inflow – 73,000 cubic feet per second (cfs)
- Current Reservoir Release – 52,000 cfs
- Annual Flood control and multiple use zone – El. 1,837.5 to 1,850 msl
- Exclusive flood control zone – El. 1,850-1,854 msl
- Top of spillway gates - 1,854 feet msl
- 6 a.m. River Stage at Bismarck-13.2 feet (Flood stage at Bismarck-16.0 feet)
- Planned scheduled releases
 - Thursday, May 19: hold 52,000 cfs
 - Friday May 20 increase to 54,000 cfs at 8 a.m.
 - Saturday, May 21 Hold at 54,000 cfs
 - Sunday, May 22 Increase to 55,000 cfs at 8 a.m.

Oahe Dam and Lake:

- Midnight reservoir level – 1616.9 feet msl
- Yesterday's Reservoir Inflow – 54,000 cfs
- Yesterday's Reservoir Release – 52,100 cfs
- 6 am river stage at Pierre 11.0 feet (Flood stage 15.0)
- Annual Flood control and multiple use zone – El. 1607.5 to 1617.0 feet msl
- Exclusive flood control zone – El. 1617.0 to 1620.0 feet msl
- Top of spillway gates: - 1620.0 feet msl
- Planned scheduled releases:
 - Thursday, May 19 through Friday, May 20: 57,000 cfs
 - Actual releases may not equal scheduled releases because Oahe is being used to follow power loads.

Garrison Dam is a 210-foot high rolled earth embankment. Discharges are normally passed through five power tunnels having a combined discharge capacity of 41,000 cfs, and three flood tunnels having a combined discharge capacity of 98,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with 28 tainter gates and has a maximum discharge capacity of 660,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will go through the power plant and regulating tunnels.

U.S. Army Corps of Engineers – Omaha District 1616 Capitol Ave., Omaha, Neb. 68102

<http://www.nwo.usace.army.mil/>

Find us on Facebook at [facebook.com/OmahaUSACE](https://www.facebook.com/OmahaUSACE) and on Twitter at twitter.com/OmahaUSACE

[Type text]

(more)

Oahe Dam is a 245-foot high rolled earth embankment. Discharges are normally passed through seven power tunnels having a combined discharge capacity of 56,000 cfs, and six flood tunnels having a combined discharge capacity of 111,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with eight tainter gates and has a maximum discharge capacity of 80,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will be made through the power plant and outlet tunnels.

Daily bulletin updates are available from the Corps' website: <http://www.nwo.usace.army.mil/>

Northwestern Division's water management website for the most up to date information:
<http://www.nwd-mr.usace.army.mil/rcc/index.html>

U.S. Army Corps of Engineers Contact: Jody Farhat, Chief, Missouri River Basin Water Management 402-996-3840

###

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 7:31 AM
To: Farhat, Jody S NWD02
Subject: RE: More Questions (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,

I think it would be a good idea to visit with the state about this. I don't know that we should change our plan as we're not hearing many real issues at the current level and folks do not seem to have major concerns up to a river stage of 14 feet. It appears as though our releases will put the river at a stage of around 13.6 feet. If we get the rains and contributions that the NWS indicated may be coming and we see an increase of 8,000 cfs below the dam we would push over the 14 foot stage. We both know that any impacts will be blamed on us, so it would be nice to at least have the State on board with our decision.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 19, 2011 6:18 AM
To: [REDACTED] NWO
Subject: Re: More Questions (UNCLASSIFIED)

[REDACTED] - one thing we could mull over is to hold off on the last two increases until next week, ie. hold the current 52 thru the weekend. We could talk to the state and see what they think - whether their concern for Bismarck is enough to put a little extra water in the reservoir.

Jody

----- Original Message -----

From: Farhat, Jody S NWD02
To: [REDACTED] NWO
Sent: Wed May 18 19:00:53 2011
Subject: Re: More Questions (UNCLASSIFIED)

[REDACTED]
Since I'm on my bb, these are the short answers. We can discuss the details tomorrow.

Flow estimates are never very accurate. I suspect the bismarck gage is reporting several 1000 more cfs than is actually there. The Oahe inflow calculations are also very rough. We basically look at the 24 hourly pool elevations and pick the elevation that we best think represents the midnight pool elevation. Then knowing the pool elevation we determine the storage change for the previous 24 hours and then calculate the inflow based on the equation that inflow - outflow = storage change. We also work estimated depletions, rain, wind, and evap into the basic equation. But none of those numbers is exact, so it's really just an estimate of inflow.

On the daily bulletin I've been inputting the actual release rate at the time of the bulletin rather than the previous day's release so that folks see the 2000 cfs increase every other day rather than daily averages which would make it appear we're going up every day. If you want, I can use previous day's actual but I thought this would result in fewer questions.

And lastly we will consider cutting back but only for a big event and only if the cut back can improve the situation downstream. Like I always tell the downstream folks, we've got a large volume of water to release and every time we cut backs means that when we start back up it will have to be at a higher rate. This is especially true now since the pool is rising and we have all that snow left to come. Once the pool has crested, is on its way back down and is well away from exclusive we'll have more flexibility to cut back for local events.

I was surprised no one asked on the call today too. The NWS guy brushed on the subject (which I thought was a bit out of line for him) but no one took the bait.

Hope this answers some of the questions. We can talk more tomorrow.

Jody

----- Original Message -----

From: [REDACTED] NWO

To: Farhat, Jody S NWD02

Sent: Wed May 18 17:53:15 2011

Subject: More Questions (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

Jody,

I hate to burden you with additional questions, but as I learn the answers I can respond to them in the future.

The SWC called me this afternoon and asked me about Oahe Inflows verses the Bismarck Gage? We show 47,000 inflows into Oahe in River Watch verses 58,000 cfs at the Bismarck gage? Can we explain the discrepancy? I'd have thought that Oahe inflows would exceed the Bismarck gage, when considering the other trib's into Oahe.

Also, my staff has asked me about this twice now. The Daily Bulletin posted on the web, shows a higher discharge from Garrison, than our daily average. As an example, today's Daily Bulletin showed Garrison discharges at 55,160 cfs, verses our daily average of 52,000 cfs. At first I thought this may be attributable to our "variance" that we are allowing WAPA, but I visited with Dale Evenson about our production order and he indicated that we are only allowed to under run by 1,500 cfs and that we were running very close to the 52,000 cfs. Can you educate me on this issue, please?

Lastly, following my interview with KFYZ today, someone called in and asked if we were going to reduce releases from Garrison if we get the heavy rains that are forecasted? I thought about this during today's call with the EM's and was surprised that nobody asked that question. I think this is something we should be prepared to discuss during Friday's call...

Again, I don't want to overburden you with questions. My hope is that once I understand some of this better I can provide answers and you won't have to deal with them.

Todd

[REDACTED]
[REDACTED]
Garrison Project

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED]

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 10:13 AM
To: [REDACTED]
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Just left you a voice message. [REDACTED] called back. He talked to the chief of staff and they would like us to hold releases at 55 kcfs. We're going to update the monthly study and get back to him to have better information on where we think we'll be headed on releases in June. Also trying to convey the concern about reaching the top of gates.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 9:08 AM
To: [REDACTED]
Cc: [REDACTED]

Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 10:46 AM
To: [REDACTED]
Subject: RE: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

It's a bit disingenuous to say that both we and the usgs are calling the flows the same since we are simply believing everything they tell us and are not using our own engineering judgment in this process. I've spoken to you repeatedly over the past year or two about my view on shifting and apparently it is not getting thru.

Jody

-----Original Message-----

From: [REDACTED]
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02; [REDACTED]
Cc: [REDACTED]
Subject: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

All,

I spoke with the Brad Sether of the ND USGS to verify their rating curve. We (Corps and USGS) are both showing a flow at Bismarck of about 50,000 cfs and a stage of 13.4 feet. The USGS measured the Missouri River at Bismarck twice yesterday and noted a significant negative shift (-1.30'). They believe their rating curve to be accurate. This compares to last fall's shift, which Brad feels is a more normal shift, of -0.30'. What that means is that the channel is (currently) less efficient than it was this fall/winter, likely due to backwater effects from Oahe pool levels. Unknown as to when the channel will return back to more normal conditions. The USGS plans to measure at Bismarck every other week, which is twice their norm.

Currently, not much is contributing from the tributaries between Garrison and Bismarck, so the release from Garrison is pretty much what we see at Bismarck (3 days, or so, later).

Current Bismarck rating (remember, this changes based on changing channel conditions):

13.0' = 47.6 kcfs
13.5' = 51.1 kcfs
14.0' = 55.1 kcfs
14.5' = 59.3 kcfs
15.0' = 63.7 kcfs

[REDACTED]

[REDACTED]

Reservoir Regulation Team Lead
Missouri River Basin Water Management,

Northwestern Division, USACE

-----Original Message-----

From: Farhat, Jody S NWD02

Sent: Friday, May 20, 2011 9:08 AM

To: [REDACTED]

Cc: [REDACTED]

Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED]

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 11:12 AM
To: [REDACTED]
Subject: RE: Call with [REDACTED] (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Agree, but if they want a few days of 55 kcfs to prepare, we're not strongly opposed.

-----Original Message-----

From: [REDACTED]
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I'm sure that [REDACTED] understands our position and my gut feeling is he'll support us, but I'm sure he's getting pressure from his boss. I think June forecast numbers may help him present the case to his boss? Lastly, just my opinion... I think coordination is important, but I'm not sure that we want the Chief of Staff making water management decisions?

[REDACTED]

P.S. FYI, it was kind of odd, but Col Ruch just called me. He asked if I need anything and said that he was going bring up some points this afternoon about why we didn't increase releases sooner...

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 10:13 AM
To: [REDACTED]
Subject: RE: Call with [REDACTED] (UNCLASSIFIED)


Classification: UNCLASSIFIED
Caveats: NONE

Just left you a voice message. [REDACTED] called back. He talked to the chief of staff and they would like us to hold releases at 55 kcfs. We're going to update the monthly study and get back to him to have better information on where we think we'll be headed on releases in June. Also trying to convey the concern about reaching the top of gates.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 9:08 AM
To: [REDACTED]
Cc: [REDACTED] R
[REDACTED]
Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

 alled and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 12:21 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] and I talked and we don't think it's necessary to have a NWS person on the call today to brief the east side weather. We're confident we have a handle on it. The NWS was on an earlier call with us, so we can relay the information. If we continue with these calls we can make arrangements for next time.

Jdoy

-----Original Message-----

From: [REDACTED]
Sent: Friday, May 20, 2011 12:15 PM
To: [REDACTED]
Cc: [REDACTED]
Farhat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

OK, they would just be briefing west side weather so could go right before me, would that be ~1300? Will see if they have any slides and get them to you.

-----Original Message-----

From: [REDACTED]
Sent: Friday, May 20, 2011 9:50 AM
To: [REDACTED]
Cc: [REDACTED]
Farhat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

[REDACTED]

Thanks for sending your updated slides.

You can view your slides from the viewer at:

<https://egis.nwp.usace.army.mil/pls/apex/f?p=200:6:3597175069780256::NO>

It is under the "NWD CMT Flood Briefings" folder on the left hand side of viewer

If they want to show slides, please have them send them to me, and I will add them to the presentation. Would they be briefing east and west side weather? If so, they will be first to brief, if not, I will have them right before you?

[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers
D [REDACTED]
[REDACTED]
[REDACTED]

Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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-----Original Message-----

From: [REDACTED]
Sent: Friday, May 20, 2011 9:23 AM
To: [REDACTED]
Cc: [REDACTED]
Farhat, Jody S NWD02; [REDACTED]
Subject: Revised Briefing (UNCLASSIFIED)

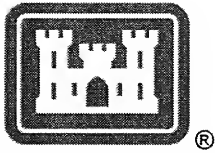
Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] I revised the presentation slightly on the attached if you can replace what I sent previously. Also, [REDACTED] and I talked about possibly having a rep from the National Weather Service River Forecast Center join the brief for a short (5 min total?) summary of expected weather and streamflows like they do for us at our weekly brief each Thurs. I called and they are standing by to do this, so can you please me know when they should plan to join in and if they want to show any graphics (they don't need to if it is a problem) should they do it via internet?

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE



U.S. ARMY CORPS OF ENGINEERS

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NEWS RELEASE

For Immediate Release: July 6, 2011

Contact: Monique Farmer - (402) 995-2420
monique.l.farmer@usace.army.mil

Jody Farhat – (402) 996-3840
Todd Lindquist – (701) 654-7411, X-207

Corps plans further release increases out of Garrison Reservoir

Omaha, Neb. – The U.S. Army Corps of Engineers Water Management Division announced today that it plans to increase the releases out of Garrison Reservoir above levels previously planned.

“Inflows into the reservoir continue to exceed expected levels due to the much above normal precipitation over the past two weeks,” said Jody Farhat, Chief of the Water Management Division here. “The reservoir has risen over two feet since early May and is currently only 0.4 feet below the base of the exclusive flood control zone.” The exclusive flood control zone, which extends from elevation 1850 feet to the top of the spillway gates at elevation 1854 feet, is maintained exclusively for flood control. Water is released from this zone as quickly as downstream channel conditions permit so that sufficient storage remains available for capturing future inflows.

In addition to the much above normal rainfall during May, the melt of the mountain snowpack is behind schedule due to unseasonably cold temperatures. “In years when the melt is delayed, we typically see increased runoff volumes from the mountain snowpack. That’s because when it finally does come off, it melts quicker without the typical freeze-thaw pattern which allows more to soak in the ground,” said Farhat. Normally, the mountain snowpack peaks in mid-April, however this year it continued to accumulate into early May. The snowpack peaked at 141 percent of normal in the reach above Fort Peck and 136 percent of normal in the reach between Fort Peck and Garrison.

The current release from Garrison is 54,000 cfs. It is scheduled to be increased to 56,000 cfs on Sunday and then held at that rate until Thursday to provide time for land owners to take appropriate measures to protect their property. Additional release increases to 58,000 cfs on Thursday, May 26 and 60,000 cfs on Saturday, May 28 are planned. Additional increases may be necessary in early June if conditions continue to deteriorate.

“We recommend that folks prepare for an additional two-foot increase in river levels to accommodate the higher releases and provide some ability to withstand the impacts of typical summer thunderstorms which are sure to occur in the coming months,” said Farhat. The increased releases will be necessary through the summer and into the fall to evacuate the near record runoff. Much above normal releases are being experienced at the Corps’ other 5 reservoirs on the mainstem of the Missouri River.

With all the generating units available the release capacity of the powerplant is 41,000 cfs. Currently, on-going maintenance efforts are limiting the releases to 30,000 cfs through powerplant. The regulatory tunnels will be used for releases above powerplant capacity. Due to the need to release water through the regulatory tunnels, access to the wing walls will be closed for public safety.

During any flood response activities throughout the basin, the Corps will provide regular updates directly to the public via its Facebook (www.facebook.com/OmahaUSACE) and Twitter accounts (www.twitter.com/OmahaUSACE).

-more-

U.S. Army Corps of Engineers – Omaha District 1616 Capitol Ave., Omaha, Neb. 68102

<http://www.nwo.usace.army.mil/>

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[Type text]

View daily and forecasted reservoir and river information on the Water Management section of the Northwestern Division homepage at: <http://www.nwd-mr.usace.army.mil/rcc>.

Other links of interest:

- <http://www.nwo.usace.army.mil/html/op-e/flood.html>
- www.facebook.com/OmahaUSACE
- www.twitter.com/OmahaUSACE
- www.mraps.org
- www.moriverrecovery.org

###

[REDACTED] NWO

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 9:08 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]
Todd Sando called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED
Caveats: NONE

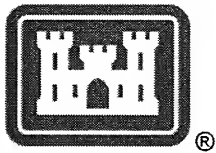
[REDACTED]

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 3:01 PM
To: [REDACTED] NWO; Farhat, Jody S NWD02; Thomas, Kimberly S NWO
Cc: Oldham, Margaret NWO
Subject: Riverwatch Daily #8 (UNCLASSIFIED)
Attachments: NR-RIVERWATCH5-11.No8docx.docx

Classification: UNCLASSIFIED
Caveats: NONE

8 attached

Classification: UNCLASSIFIED
Caveats: NONE



U.S. ARMY CORPS OF ENGINEERS

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NEWS RELEASE

For Immediate Release: July 1, 2011

Contact: Kevin R. Quinn 402-995-2419

kevin.r.quinn@usace.army.mil

Jody Farhat 402-996-3840

Riverwatch Daily – Garrison and Oahe Dams

Update #8

OMAHA, Neb. – Due to high runoff from the far-above-normal plains and mountain snowmelt, the U.S. Army Corps of Engineers is evacuating large volumes of water from Garrison Dam in Riverdale, N.D. and Oahe Dam near Pierre, S.D.

In expectation of continued high runoff, the U.S. Army Corps of Engineers will release a daily bulletin detailing releases and levels for both dams. Below are the May 20, 2011 statistics for the two dams:

Daily Information Update

Garrison Dam and Lake Sakakawea:

- Midnight reservoir level – 1849.6 feet mean sea level
- Yesterday's Reservoir Inflow – 63,000 cubic feet per second (cfs)
- Current Reservoir Release – 54,000 cfs
- Annual Flood control and multiple use zone – El. 1,837.5 to 1,850 msl
- Exclusive flood control zone – El. 1,850-1,854 msl
- Top of spillway gates - 1,854 feet msl
- 6 a.m. River Stage at Bismarck-13.4 feet (Flood stage at Bismarck-16.0 feet)
- Planned scheduled releases
 - Friday May 20 increase to 54,000 cfs at 8 a.m.
 - Saturday, May 21 Hold at 54,000 cfs
 - Sunday, May 22 Increase to 56,000 cfs at 8 a.m.
 - Monday, May 23 Hold at 56,000 cfs

Oahe Dam and Lake:

- Midnight reservoir level – 1616.9 feet msl
- Yesterday's Reservoir Inflow – 61,000 cfs
- Yesterday's Reservoir Release – 52,500 cfs
- 6 am river stage at Pierre 9.7 feet (Flood stage 15.0)
- Annual Flood control and multiple use zone – El. 1607.5 to 1617.0 feet msl
- Exclusive flood control zone – El. 1617.0 to 1620.0 feet msl
- Top of spillway gates: - 1620.0 feet msl
- Planned scheduled releases:
 - Friday, May 20 through Monday, May 23: 57,000 cfs
 - Actual releases may not equal scheduled releases because Oahe is being used to follow power loads.

Garrison Dam is a 210-foot high rolled earth embankment. Discharges are normally passed through five power tunnels having a combined discharge capacity of 41,000 cfs, and three flood tunnels having a combined discharge capacity of 98,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with 28 tainter gates and has a maximum discharge capacity of 660,000 cfs at the top of its flood control zone. NOTE: The Corps has never

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<http://www.nwo.usace.army.mil/>

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[Type text]

previously used the spillway for releases. The Corps anticipates that all releases this year will go through the power plant and regulating tunnels.

Oahe Dam is a 245-foot high rolled earth embankment. Discharges are normally passed through seven power tunnels having a combined discharge capacity of 56,000 cfs, and six flood tunnels having a combined discharge capacity of 111,000 cfs. They may also be passed through the spillway when necessary. The spillway is equipped with eight tainter gates and has a maximum discharge capacity of 80,000 cfs at the top of its flood control zone. NOTE: The Corps has never previously used the spillway for releases. The Corps anticipates that all releases this year will be made through the power plant and outlet tunnels.

Daily bulletin updates are available from the Corps' website: <http://www.nwo.usace.army.mil/>

Northwestern Division's water management website for the most up to date information:
<http://www.nwd-mr.usace.army.mil/rcc/index.html>

U.S. Army Corps of Engineers Contact: Jody Farhat, Chief, Missouri River Basin Water Management 402-996-3840

###

[Type text]

[REDACTED]

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 1:58 PM
To: [REDACTED]@NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; Bertino, John J Jr NWO; Blechinger, Erik T NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; DLL-CENWO-ED-H; Farhat, Jody S NWD02; Farmer, Monique L NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; Jordano, James J LTC NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; Oldham, Margaret NWO; [REDACTED] NWO; Quinn, Kevin R NWO; [REDACTED] NWO; Ruch, Robert J COL NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; Thomas, Kimberly S NWO; [REDACTED] NWO; Wingert, Kevin M NWO
Subject: Omaha District Summary of Tributary Reservoir Regulation Activities 5.20.11 (UNCLASSIFIED)
Attachments: 5.20.11 TribResSumm.pdf; dailybull 5.20.11.pdf; Upper Missouri Snow 5.20.11.pdf; Upper Yellowstone Snow 5.20.11.pdf; Upper North Platte Snow 5.20.11.pdf; South Platte Snow 5.20.11.pdf; Pipestem Pool Plot 5.20.11.pdf; Jamestown Pool Plot 5.20.11.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Mountain snowpack on May 20, 2011 is 120% of the 30-year peak historical average. The Upper Missouri River snowpack is currently 111%, the Upper Yellowstone is 126%, the Upper North Platte Basin is 145% and the South Platte Basin is 138% of the 30-year peak historical average. Snow Water Equivalents at these stations have crested and are receding. Water Control is monitoring the high basin snowpack and is coordinating with appropriate agencies.

The Bureau of Reclamation's Glendo Reservoir is at elevation 4629.1 ft msl with 87% of the multipurpose pool occupied. The USBR May 1 forecast is for over 2 million acre-feet of runoff into the North Platte Basin, 287% of normal. Agency and stakeholder conference calls began May 6 to coordinate the high releases along the North Platte River.

The Jamestown/Pipestem combined reservoir release rate has been held at a level of approximately 1800 cfs since April 17. The Corps has completed agency coordination concerning the long term release schedule for Jamestown and Pipestem Reservoirs. Without significant additional rainfall, combined releases at 1800 cfs will be made until early July, and then gradually ramped down with complete evacuation of flood storage by late August. All agencies favored a fast evacuation of storage, with the exception of Lamoure County, where the golf course near Grand Rapids is partially under water.

Fort Peck Lake is 3.1 feet below the base of the exclusive flood control pool and Lake Sakakawea is only 0.4 feet away from its base of exclusive. Lake Oahe is at the base of exclusive. Gavins Point spillway releases were increased by 1,000 cfs on May 19 for a combined 57,500 cfs release.

For more detailed information, see the attached.

Please contact [REDACTED] ([REDACTED]) or [REDACTED] ([REDACTED]) if you have questions.

[REDACTED]
[REDACTED]
Hydrologic Engineering Branch
US Army Corps of Engineers
phone: ([REDACTED]) [REDACTED]

email: [REDACTED]@usace.army.mil

Classification: UNCLASSIFIED

Caveats: NONE

**Operational Summary
Omaha District Tributary and Missouri River Mainstem Reservoirs
May 20, 2011**

**Water Control and Water Quality Section
Hydrologic Engineering Branch**

Detailed Summary

Mountain Snowpack

Mountain snowpack on May 20, 2011 is 120% of the 30-year peak historical average. The Upper Missouri River snowpack is currently 111%, the Upper Yellowstone is 126%, the Upper North Platte Basin is 145% and the South Platte Basin is 138% of the 30-year peak historical average. Snow Water Equivalents at these stations have crested and are receding. Water Control is monitoring the high basin snowpack and is coordinating with appropriate agencies.

North Platte

The Glendo Reservoir elevation is 4629.1 ft msl with 87% of the multipurpose pool occupied. The Bureau of Reclamation has evacuated storage from the North Platte system of reservoirs in anticipation of the high inflows from the much above normal mountain snowpack in the Upper North Platte and Laramie River Basins. Agency and stakeholder conference calls began May 6 to coordinate the high releases along the North Platte River.

Fort Peck, Garrison and Oahe

Fort Peck Lake is at elevation 2242.9 ft msl, 3.1 feet from the base of the exclusive flood control pool. Lake Sakakawea's elevation is 1849.6 ft msl, only 0.4 feet from the base of exclusive. Lake Oahe is at the base of exclusive at elevation 1617.0 ft msl. Top of exclusive is 1620.0 ft msl. The Gavins Point spillway releases were increased by 1,000 cfs on 19 May for a combined release of 57,500 cfs.

Jamestown/Pipestem

The Jamestown/Pipestem combined reservoir release rate has been held at a level of approximately 1800 cfs since April 17. The Corps has completed agency coordination concerning the long term release schedule for Jamestown and Pipestem Reservoirs. Without significant additional rainfall, combined releases at 1800 cfs will be made until early July, and then gradually ramped down with complete evacuation of flood storage by late August. All agencies favored a fast evacuation of storage, with the exception of Lamoure County, where the golf course near Grand Rapids is partially under water.

Omaha District Projects – Routine Activities

Bear Creek Reservoir.

Normal Operations. Bear Creek is releasing inflow with the pool currently at elevation 5558.7 ft msl, slightly above the top of the multipurpose pool.

Bowman-Haley Dam and Reservoir, Bowman, ND

The flood pool continues to come down with 0.6% of the flood control occupied at elevation 2755.05 ft msl. It is in a fill and spill operation with the gates open.

Bull Hook – Scott Coulee Dams.

Dry detention dams – no permanent storage.

Cedar Canyon Dam (Red Dale Gulch)

Dry detention dam – no permanent storage.

Chatfield Reservoir.

Normal operations. The multipurpose pool is 98% occupied with the reservoir at elevation 5431.7 ft msl, 0.3 feet below the top of the conservation pool. The gates were shut on May 2 and there is no release at this time.

Cherry Creek Reservoir.

Normal operations. The multipurpose pool is 100% occupied with the reservoir at elevation 5550.0 ft msl, the top of the conservation pool. The release is currently 15 cfs for water rights.

Cottonwood Springs Dam and Lake.

The pool is currently at elevation 3856.5 ft msl, 18.5 feet below the top of the conservation pool with 0 cfs release.

Cold Brook Reservoir.

The Cold Brook drawdown was completed on April 25th. The current pool elevation is 3582.4 ft-msl. Small releases will be made as necessary to maintain the pool at this elevation.

Kelly Road and Westerly Creek Dam

Dry detention dams – no permanent storage.

Papillion Creek Dam No. 11 – Cunningham Dam

The reservoir was drawn down 3 feet in October and November of 2010 for rehabilitation work along the shoreline. On February 28 the gate was closed and was allowed to begin refilling. The multi-purpose pool was filled on April 22, 2011. Currently, the pool elevation is at 1121.4 ft msl and is in fill and spill operations.

Papillion Creek Dam No. 16 – Standing Bear Dam and Lake

Project is releasing 5 cfs in fill and spill operations.

Papillion Creek Dam No. 18 –Zorinsky Dam and Lake

Current drawdown elevation for zebra mussel control is 1091.7 ft msl, 18.3 feet below the conservation pool. A conference call with the Nebraska Game and Parks Commission and the City of Omaha was held March 29 and a possible option for rotenone application in June to kill remaining fish was discussed. If Veligers (young zebra mussels) are not present, the gate will be closed sometime in July. The Nebraska Game and Parks Commission agreed with this plan, but the City of Omaha continued to express concerns regarding safety issues, particularly if the lake is still down after school is out in the spring. The Corps has prepared a write-up describing the proposed procedures and timelines and

has asked the City and Game and Parks for a response. The City has not provided a letter at this time. Until a letter is provided by the City, the Corps will continue with the current plan and keep the pool elevation drawn down.

Papillion Creek Dam No. 20 – Wehrspann Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Pipestem Dam and Lake

Pipestem Reservoir is currently at a level of 1486.5 feet msl with 69.9% of the flood control storage occupied. The current releases are 200 cfs and yesterday's inflows were 337 cfs. The reservoir is forecasted to peak next week at a level of approximately 1486.6 feet msl, which is the third highest annual peak pool level on record. The peak daily inflow into Pipestem Reservoir was 4,200 cfs on April 11. See the Detailed Summary for additional information about long-term releases.

Salt Creek Dam No. 2 – Olive Creek Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 4 – Bluestem Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 8 – Wagon Train Dam and Lake

Project is releasing 11 cfs in fill and spill operations.

Salt Creek Dam No. 9 – Stagecoach Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 10 – Yankee Hill Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 12 – Conestoga Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 13 – Twin Lakes Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 14 – Pawnee Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 17 – Antelope Creek Dam and Holmes Park Lake

Project is releasing 13 cfs in fill and spill operations.

Salt Creek Dam No. 18 – Branched Oak Dam and Lake

Project is releasing 18 cfs in fill and spill operations.

Spring Creek Dam and Lake Pocasse

Subimpoundment of Lake Oahe. Pool level is normally at or near elevation 1617 ft msl. A temporary gage was installed to help monitor the spring snowmelt. This gage was removed on May 7 and at that time the pool elevation was 1617.9 ft-msl. Currently the Oahe Project

Office is reading the Pocasse elevation monthly. Snowmelt inflow was observed in March and April resulted in a peak pool elevation near 1620 ft msl on April 7. No concerns are expected unless the pool gets to elevation 1625 ft msl.

Snake Creek Dam and Lake Audubon.

Subimpoundment of Lake Sakakawea (Garrison Dam). The USBR regulates the pool level with their pumping plant.

Bureau of Reclamation Projects

Tiber Dam and Lake Elwell.

The pool is currently at elevation 2985.08 ft msl. The snowpack above Tiber peaked at 142% of the 30 year average peak. . Releases are 2,570 cfs with an inflow of 3,099 cfs.

Canyon Ferry Reservoir.

The pool is currently near elevation 3778.4 ft msl and is being drawn down for the upcoming runoff season. Releases were increased to 14,000 cfs on May 20 in response to the recent rain events and local snow melts. Releases have been increased repeatedly to control the rate of rise in the reservoir. The USBR typically targets some elevation near the base of the joint use pool, elevation 3783 feet, msl, sometime prior to the spring runoff season.

Clark Canyon Reservoir.

The pool elevation is at 5544.9 ft msl and slowly rising. This is 1.2 feet below the base of the flood pool. Snowpack above Clark Canyon peaked at 140% of normal peak snowpack. The current inflow is estimated at approximately 378 cfs and the release is 352 cfs.

Yellowtail Dam.

The pool is currently near elevation 3606.55 ft msl. Normally, the USBR drafts the pool to 3620 ft msl, but it has been lowered nearly 17 feet since mid-April in anticipation of heavy runoff. Current models are showing the pool will be drawn down to 3604 ft msl before inflows begin to pick up. The base of the joint use pool is 3614 ft msl. The snowpack above Yellowtail peaked near 140% of normal peak snowpack. Releases have been increased to control the rate of rise in the pool and in response to the recent rain events. The current inflow is 7,096 cfs and the release is 7,924 cfs. USBR is planning to increase releases to 8,000 cfs in the next few days.

Glendo Reservoir.

The pool elevation is 4629.1 ft msl with 87% of the multipurpose pool occupied. The USBR typically stores winter and spring flows in an attempt to reach the base of the flood control pool (4635 ft msl) prior to the beginning of irrigation season in the summer. Over the past month, the North Platte River System has evacuated storage in preparation for high inflows due to an above normal snow pack in the Upper North Platte and Laramie River Basins. The USBR May 1 system inflow forecast for the period of April through July was increased by 355,000 AF when compared to the April 1 forecast for the same period. The May 1 forecast is to see over 2 million AF of inflow into the North Platte River Basin. Agency and stakeholder conference calls began on May 6 to coordinate the high releases along the North Platte River.

Jamestown Reservoir.

The current pool elevation is 1449.52 ft msl, 71% of the flood control pool occupied, and releases are 1,600 cfs. Inflows crested at 14,300 cfs on April 15 and are currently around 400 cfs. The reservoir peaked on May 1 at a level of 1451.3 feet above mean sea level (msl), which is the second highest annual peak pool level on record. Releases were reduced once in the past week because of rainfall in the Jamestown area, but are now back to normal levels of 1,600 cfs. See the Detailed Summary for additional information about long-term releases.

Boysen Reservoir.

The pool level is 4709.7 ft msl, 7.3 feet below the base of the joint use pool (4717 ft msl). Prior to the spring runoff season the USBR will generally lower the pool to some elevation below the base of the joint use pool to create extra room for runoff. This year the reservoir will be lowered to 4708 ft msl before the inflow pickup. Current inflows are 2,207 cfs and the release is 2,400 cfs.

Heart Butte Dam and Reservoir (Lake Tschida).

The pool level is 2064.1 ft msl, 0.3 feet below the top of the conservation pool. Inflows are 217 cfs and releases are 316 cfs in fill and spill operations.

Keyhole Dam and Reservoir.

The pool level is elevation 4093.7 ft msl, 5.6 feet below the base of the conservation pool. Inflows are 380 cfs and the release is 0 cfs.

Pactola Dam and Reservoir.

The pool is near elevation 4580.2 ft msl, slowly rising, with nearly 100% of the conservation pool occupied. Inflows are 220 cfs and releases are 120 cfs.

Shadehill Dam and Reservoir.

The pool elevation is 2271.7 ft msl which is 0.2 feet below the base of the flood pool, 2271.9 ft msl. Inflows are 307 cfs and releases are 132 cfs.

Missouri River Mainstem Projects

The current runoff forecast for the Missouri River mainstem is 44 million acre-feet (MAF), 178% of normal, which would be the second highest runoff season in 113 years of record keeping. The 49 MAF of runoff experienced in 1997 is the record high. In response to the unusually large amount of mountain snowpack above Fort Peck and Garrison, system releases from Gavins Point Dam were increased by 1,000 cfs on May 19 to 57,500 cfs. April's monthly average Gavins Point release was 30,300 cfs.

Fort Peck

Inflows to Fort Peck were 34,000 cfs on May 19. Releases are currently 20,000 cfs. Powerplant releases are 13,000 cfs and 7,000 cfs was released through the spillway. The midnight pool reading was elevation 2242.9 ft msl, 3.1 feet below the top of the annual flood control pool. The exclusive flood pool is from elevation 2246.0 to 2250.0 ft msl.

Garrison

Garrison inflows were 63,000 cfs and releases were 52,800 cfs on May 19. Garrison releases were increased from 52,000 cfs to 55,000 cfs on May 20. The current powerplant release is 31,000 cfs and 24,000 cfs is being released through the flood tunnels. Lake Sakakawea is currently at elevation 1849.6 ft msl, only 0.4 feet from the top of the annual flood control pool. The Garrison pool elevation will likely enter the exclusive flood control

within the next few days as the Yellowstone continues to have significant inflows into the reservoir. The exclusive pool is from 1850.0 to 1854.0 ft msl.

Oahe

Outlet tunnel releases have varied from 18,000 to 26,500 cfs to allow the Western Area Power Administration to vary powerplant releases for load regulation. Lake Oahe has been just under elevation 1617.0 ft msl, the base of the exclusive flood control pool for several weeks. The top of the exclusive flood control pool is 1620.0 ft msl.

Fort Randall

Lake Francis Case is near its normal spring and summer pool elevation at 1355.0 ft msl. Powerplant releases are 32,500 cfs and 26,500 cfs is being released over the spillway.

Gavins Point

Powerplant releases are 32,500 cfs and 25,000 cfs is being released over the spillway, for a combined total of 57,500 cfs. Increased releases will be required if the runoff forecast is increased above the current 44 MAF.



US Army Corps
of Engineers
Omaha District

U.S. Army Corps of Engineers, Omaha District

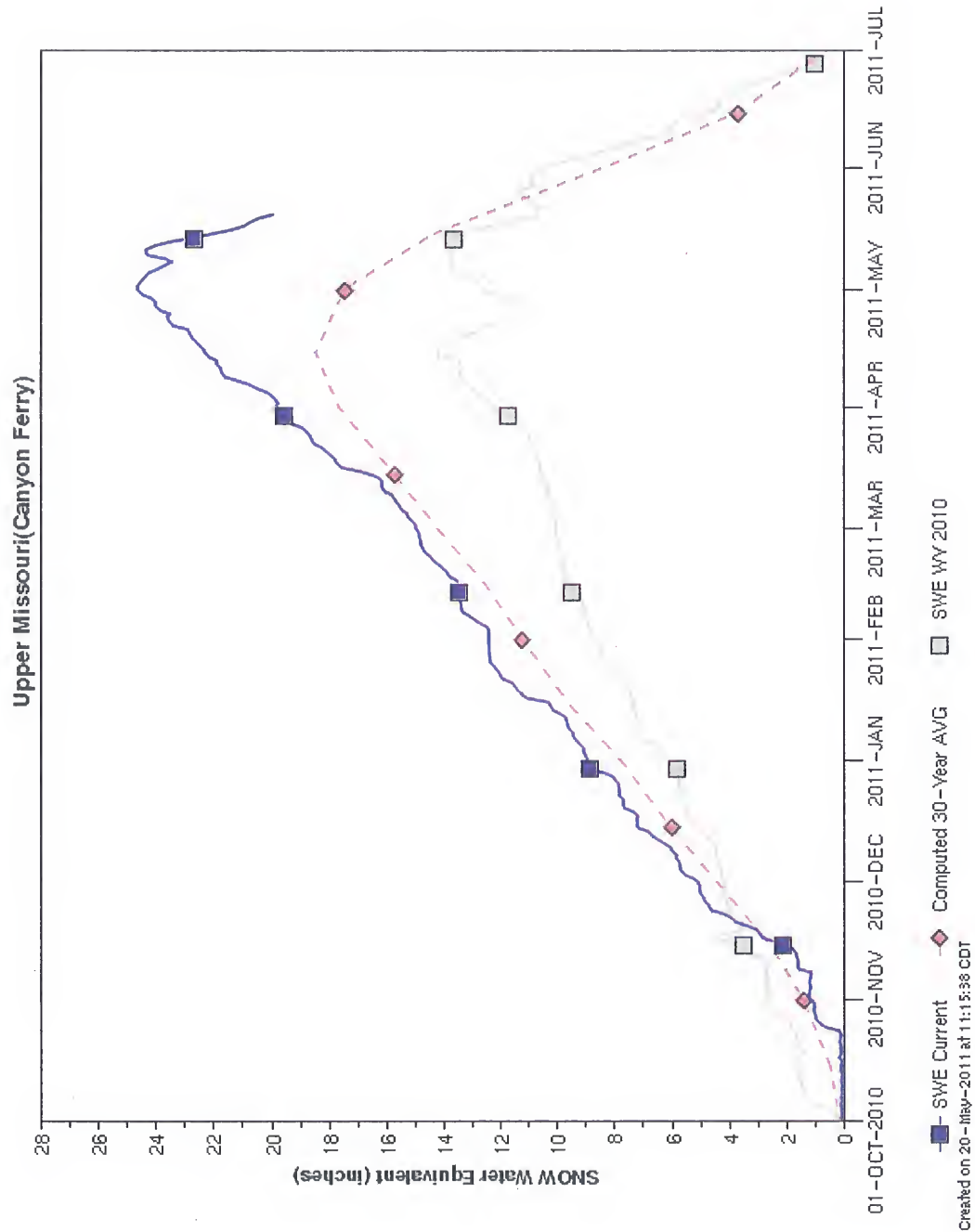
Missouri River Basin

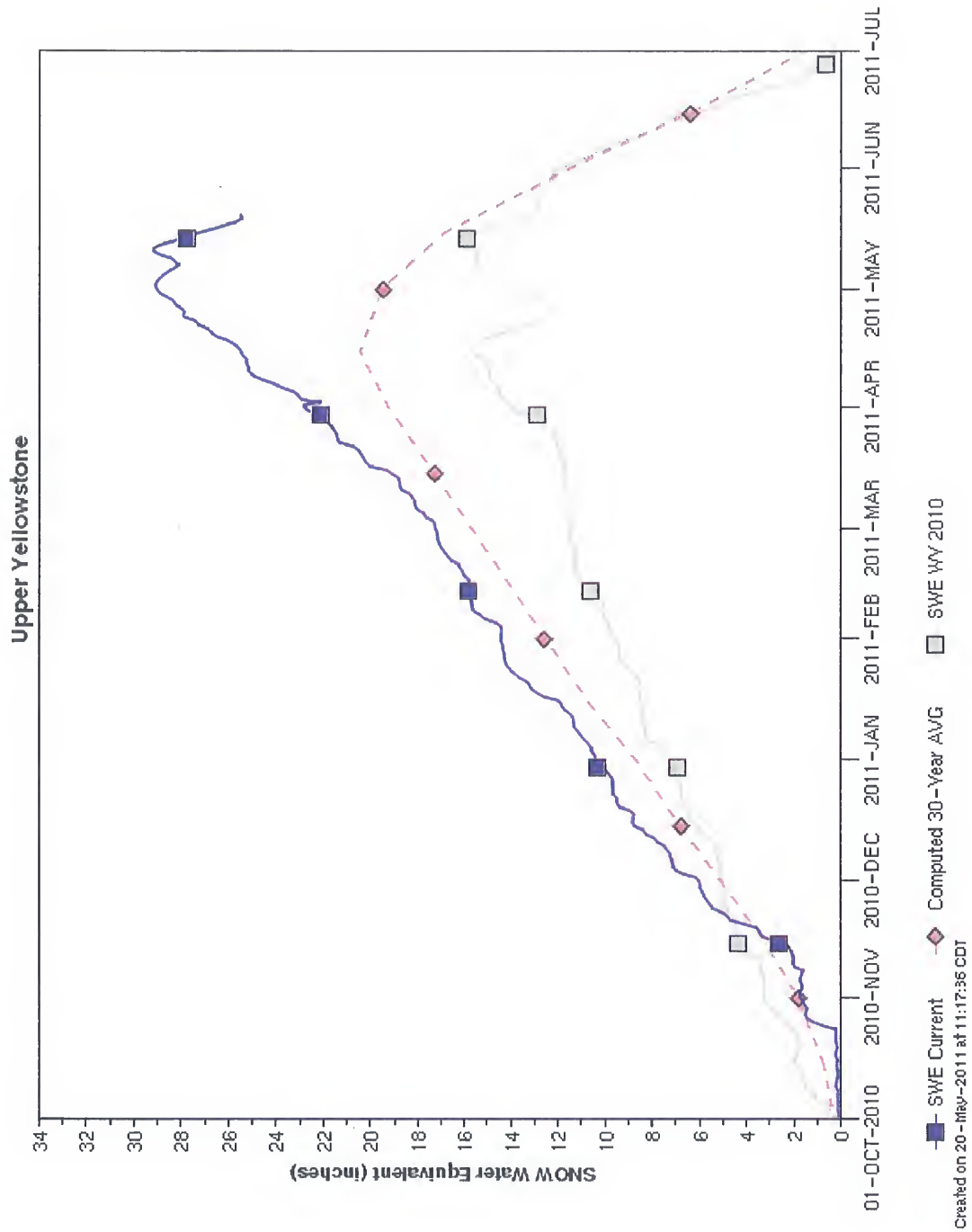
Mainstem and Tributary Reservoir Bulletin

Project Data Date/Time: 05/20/11 12:00 AM

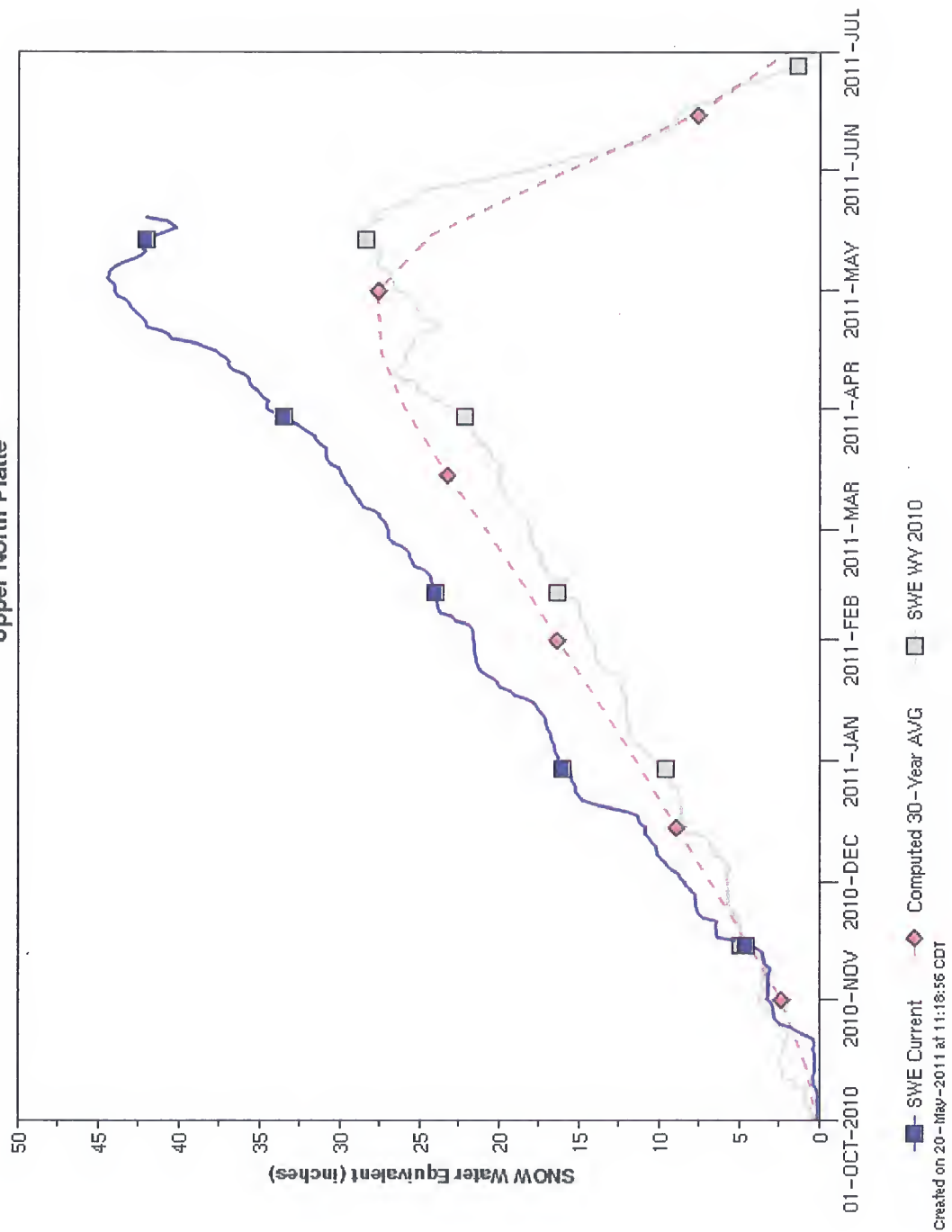
Bulletin Updated: 5/20/11 9:50 AM

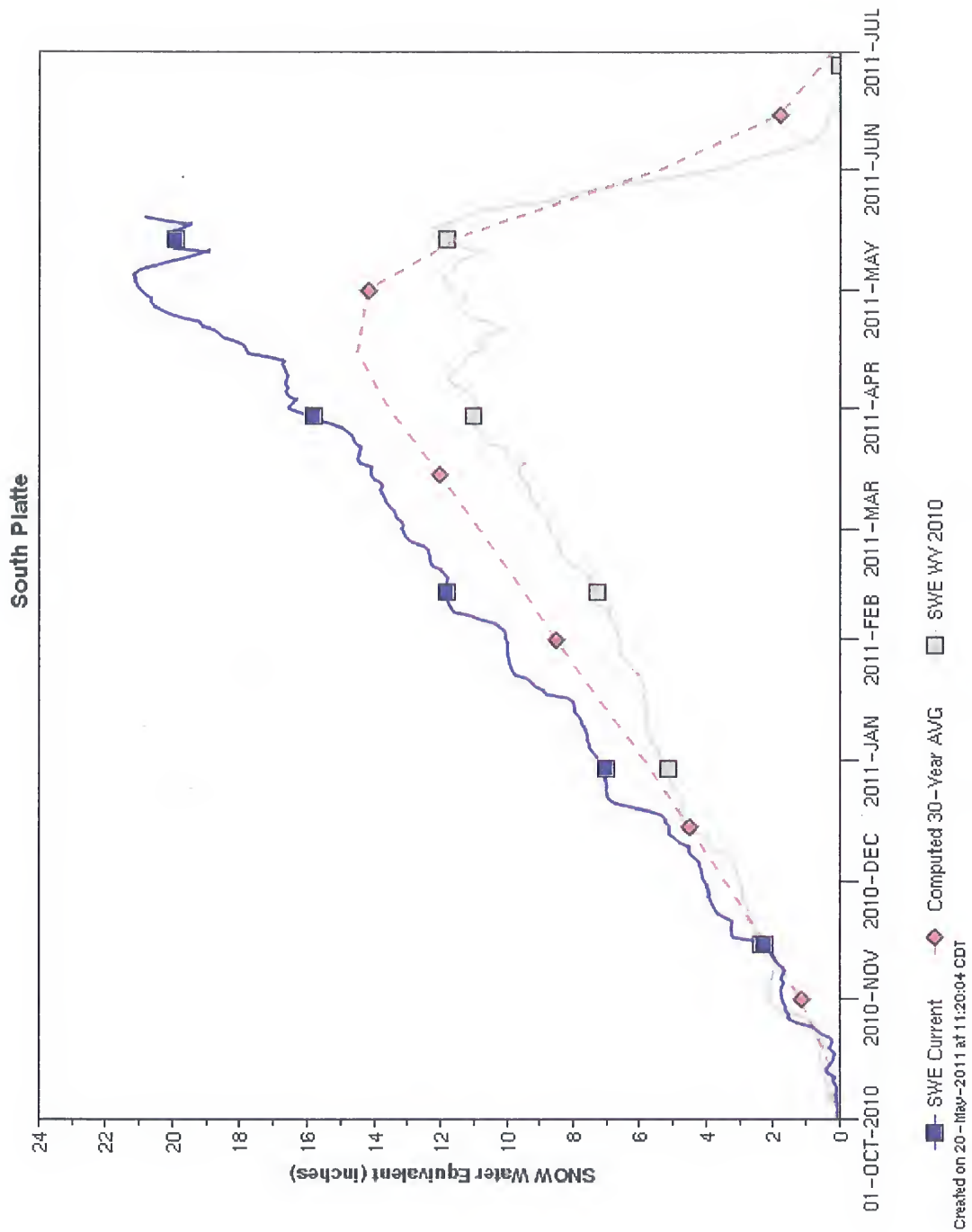
Project	Project Information				Current Data					Occupied Storage		
	Elevations (ft msl)		Storage		Elevation (ft msl)	Dly Elev. Change	Storage (ac-ft)	Inflow (dsf)	Release (dsf)	MP (%)	FC (ac-ft)	FC (%)
	MP	FC	MP	FC								
MRR - Missouri River Mainstem Projects												
*Please note Mainstem and USBR data is calculated manually and will populate before 12:00 p.m.												
Fort Peck	2234.0	2250.0	14,995,684	18,687,731	2242.90	0.13	16,757,000	34,000	19,700	100.0	1,761,316	47.7
Garrison	1837.5	1854.0	18,109,625	23,820,730	1849.58	0.01	22,164,000	63,000	52,800	100.0	4,054,375	71.0
Oahe	1607.5	1620.0	18,834,035	23,136,960	1616.95	0.08	22,008,000	61,000	52,500	100.0	3,173,965	73.8
Big Bend	1420.0	1423.0	1,621,484	1,798,614	1420.02	0.13	1,621,000	49,000	45,400	100.0	0	0.0
Fort Randall	1350.0	1375.0	3,124,368	5,418,186	1354.95	-0.21	3,528,000	52,000	56,900	100.0	403,632	17.6
Gavins Point	1204.5	1210.0	320,971	469,928	1205.76	-0.03	337,000	57,000	57,000	100.0	16,029	10.8
System Totals							66,415,000					
NWO - USBR Section 7 Projects												
Tiber	2993.0	3012.5	925,649	1,328,723	2985.08	0.05	792,700	3,099	2,570	85.6	0	0.0
Clark Canyon	5546.1	5560.4	174,367	253,442	5544.89	0.01	168,107	378	352	96.4	0	0.0
Canyon Ferry	3797.0	3800.0	1,891,888	1,992,977	3778.40	-0.02	1,314,051	13,679	13,958	69.5	0	0.0
Boysen	4725.0	4732.2	741,594	892,226	4709.72	-0.03	488,649	2,207	2,417	65.9	0	0.0
Buffalo Bill	5393.5	5393.5	646,565	646,565	5347.34	-0.25	321,567	2,778	3,512	49.7	-	-
Yellowtail	3640.0	3657.0	1,070,000	1,328,000	3606.55	-0.30	744,580	7,096	7,924	69.6	0	0.0
Jamestown	1429.8	1454.0	31,510	221,000	1449.52	-0.21	165,557	368	1,589	100.0	134,047	70.7
Heart Butte	2064.4	2094.5	67,000	214,000	2064.12	-0.06	65,869	217	316	98.3	0	0.0
Keyhole	4099.3	4111.5	194,000	334,000	4093.74	0.10	141,462	380	0	72.9	0	0.0
Pactola	4580.2	4621.5	56,000	99,000	4580.19	0.23	55,945	220	120	99.9	0	0.0
Shadehill	2271.9	2302.0	120,000	350,000	2271.70	0.07	118,626	307	132	98.9	0	0.0
Glendo	4635.0	4653.0	518,000	790,000	4629.10	0.31	449,177	7,510	5,825	86.7	0	0.0
NWO - USACE Tributary Projects												
Bowman-Haley	2754.8	2777.0	18,765	91,482	2755.05	0.00	19,187	-16	23	100.0	422	0.6
Pipestem	1442.5	1496.3	8,944	142,107	1486.52	0.12	102,007	295	204	100.0	93,063	69.9
Chatfield	5432.0	5500.0	27,428	234,207	5431.69	0.19	26,973	94	0	98.3	0	0.0
Cherry Creek	5550.0	5598.0	12,805	133,134	5550.20	0.17	12,967	65	16	100.0	162	0.1
Bear Creek	5558.0	5635.5	1,882	30,586	5558.68	0.13	1,954	61	58	100.0	72	0.3
Papio #11	1121.0	1142.0	3,054	16,907	1121.38	0.02	3,203	6	2	100.0	149	1.1
Papio #16	1104.0	1121.0	1,211	4,782	1104.38	0.00	1,260	5	5	100.0	49	1.4
Papio #18	1110.0	1128.2	2,916	10,512	1092.50	0.00	281	6	6	9.6	0	0.0
Papio #20	1095.8	1113.1	2,536	8,611	1096.16	0.00	2,610	-4	0	100.0	74	1.2
Cottonwood	3875.0	3936.0	655	8,385	3856.52	0.00	0	0	0	0.0	0	0.0
Cold Brook	3585.0	3651.4	520	7,200	3582.36	0.27	427	2	0	82.2	0	0.0
Lake Audubon	1847.0	1847.0	323,690	323,690	1846.81	0	INFLOW AND OUTFLOW NOT CALCULATED					
Lake Pocasse	1617.0	1617.0	11,000	11,000	POOL ELEVATION READ MONTHLY BY PROJECT OFFICE							
Salt Creek #02	1335.0	1350.0	1,100	4,957	1332.72	0.08	763	6	0	69.3	0	0.0
Salt Creek #04	1307.4	1322.5	2,531	9,660	1305.76	0.08	2,051	11	0	81.0	0	0.0
Salt Creek #08	1287.8	1302.0	1,780	8,375	1287.94	0.00	1,733	11	11	97.4	0	0.0
Salt Creek #09	1271.1	1285.0	1,451	5,864	1271.20	0.04	1,470	4	0	100.0	19	0.4
Salt Creek #10	1244.9	1262.0	1,629	7,468	1244.73	0.11	1,594	12	0	97.9	0	0.0
Salt Creek #12	1232.9	1252.0	1,808	9,415	1233.21	0.21	1,875	24	0	100.0	67	0.9
Salt Creek #13	1341.0	1355.0	2,161	7,182	1341.34	0.43	2,243	53	0	100.0	82	1.6
Salt Creek #14	1244.3	1263.5	7,500	27,597	1244.70	0.29	7,790	107	0	100.0	290	1.4
Salt Creek #17	1242.4	1266.0	783	6,628	1242.64	0.21	837	13	0	100.0	54	0.9
Salt Creek #18	1284.0	1311.0	25,088	96,759	1284.68	0.37	26,356	369	18	100.0	1,268	1.8

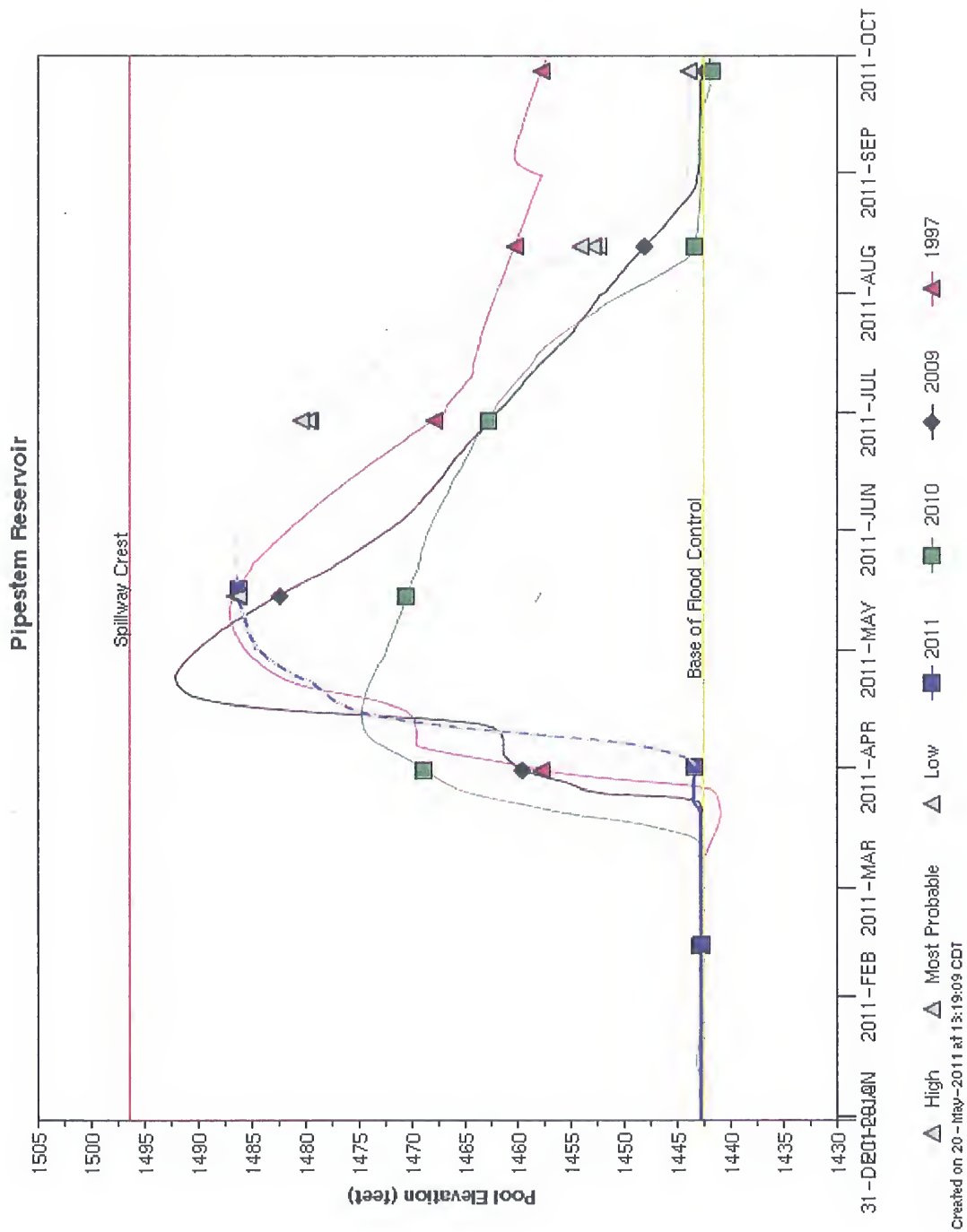


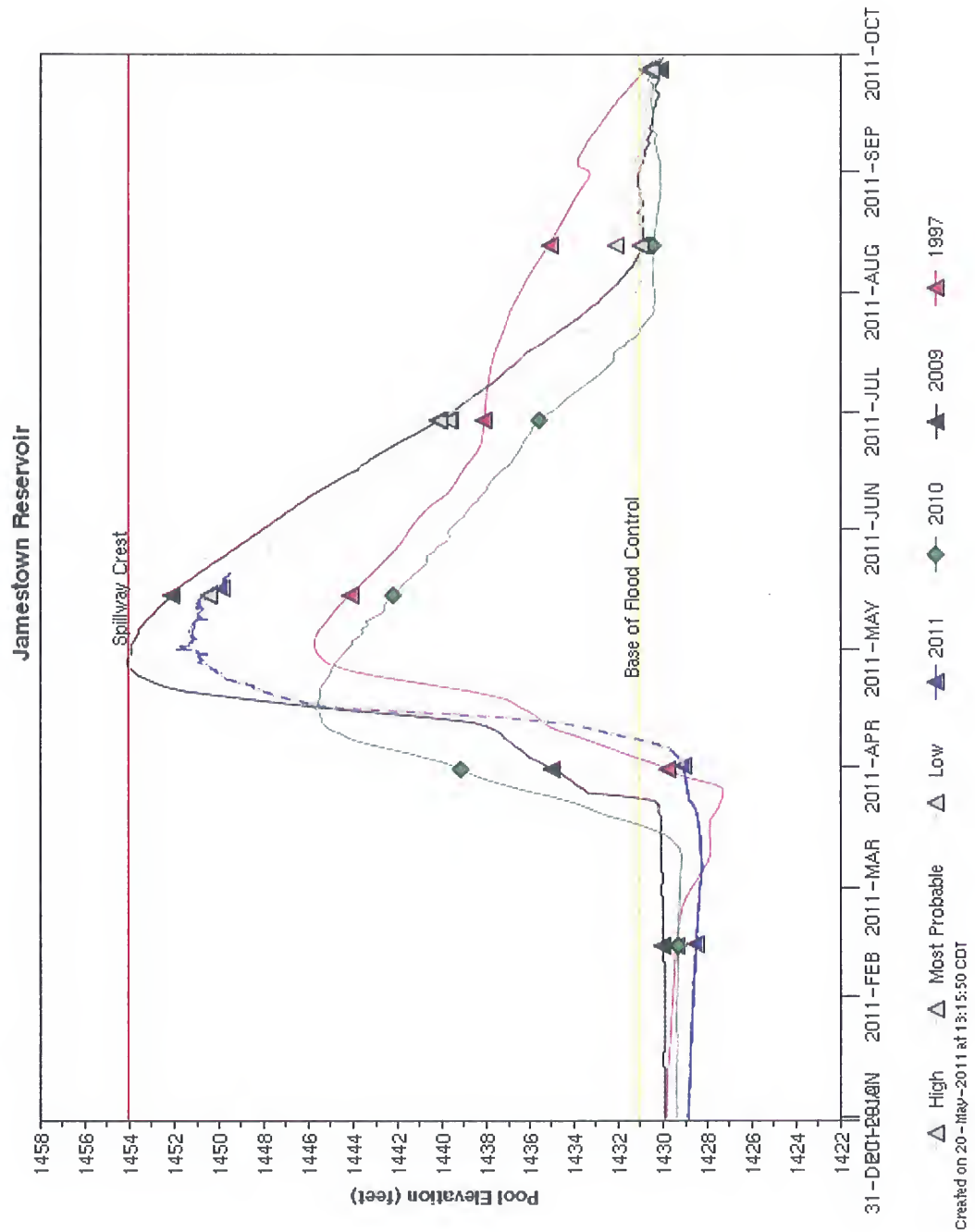


Upper North Platte









[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Friday, May 20, 2011 12:34 PM
To: Farhat, Jody S NWD02
Subject: RE: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I'm confused.

[REDACTED], P.E.
[REDACTED]

Missouri River Basin Water Management,
Northwestern Division, USACE
402. [REDACTED]
402. [REDACTED] (fax)

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 10:46 AM
To: [REDACTED] NWD02
Subject: RE: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

It's a bit disingenuous to say that both we and the usgs are calling the flows the same since we are simply believing everything they tell us and are not using our own engineering judgment in this process. I've spoken to you repeatedly over the past year or two about my view on shifting and apparently it is not getting thru.

[REDACTED]
-----Original Message-----

From: [REDACTED] NWD02
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02; [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWD02
Subject: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

All,

I spoke with the Brad Sether of the ND USGS to verify their rating curve. We (Corps and USGS) are both showing a flow at Bismarck of about 50,000 cfs and a stage of 13.4 feet. The USGS measured the Missouri River at Bismarck twice yesterday and noted a significant negative shift (-1.30'). They believe their rating curve to be accurate. This compares to last fall's shift, which Brad feels is a more normal shift, of -0.30'. What that means is that the channel is (currently) less efficient than it was this fall/winter, likely due to backwater effects from Oahe pool levels. Unknown as to when the channel will return back to

more normal conditions. The USGS plans to measure at Bismarck every other week, which is twice their norm.

Currently, not much is contributing from the tributaries between Garrison and Bismarck, so the release from Garrison is pretty much what we see at Bismarck (3 days, or so, later).

Current Bismarck rating (remember, this changes based on changing channel conditions):

13.0' = 47.6 kcfs
13.5' = 51.1 kcfs
14.0' = 55.1 kcfs
14.5' = 59.3 kcfs
15.0' = 63.7 kcfs

- [REDACTED]

[REDACTED], P.E.

[REDACTED] Reservoir Regulation Team Lead

Missouri River Basin Water Management,
Northwestern Division, USACE

402 [REDACTED]

402 [REDACTED] (fax)

-----Original Message-----

From: Farhat, Jody S NWD02

Sent: Friday, May 20, 2011 9:08 AM

To: [REDACTED] NWO

Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02

Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED],
[REDACTED] called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

[REDACTED]
Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Farhat, Jody S NWO

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 12:22 PM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; Farhat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

[REDACTED]. Time is 1230 for meeting.

[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers
Desk: [REDACTED]
Cell: [REDACTED]
[REDACTED]@usace.army.mil
[REDACTED]@usace.army.smil.mil
Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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-----Original Message-----

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 10:15 AM
To: Love, Raymond E MAJ NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; Farhat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

OK, they would just be briefing west side weather so could go right before me, would that be ~1300? Will see if they have any slides and get them to you.

-----Original Message-----

From: Love, Raymond E MAJ NWD
Sent: Friday, May 20, 2011 9:50 AM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; Farhat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

Thanks for sending your updated slides.

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It is under the "NWD CMT Flood Briefings" folder on the left hand side of viewer

If they want to show slides, please have them send them to me, and I will add them to the presentation. Would they be briefing east and west side weather? If so, they will be first to brief, if not, I will have them right before you?

[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers
Desk: [REDACTED]
Cell: [REDACTED]

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-----Original Message-----

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 9:23 AM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD;
Farhat, Jody S NWD02; [REDACTED] NWD
Subject: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED], I revised the presentation slightly on the attached if you can replace what I sent previously. Also, John and I talked about possibly having a rep from the National Weather Service River Forecast Center join the brief for a short (5 min total?) summary of expected weather and streamflows like they do for us at our weekly brief each Thurs. I called and they are standing by to do this, so can you please me know when they should plan to join in and if they want to show any graphics (they don't need to if it is a problem) should they do it via internet?

Classification: UNCLASSIFIED

Caveats: NONE

Burke, Linda NWO

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 12:15 PM
To: [REDACTED] MAJ NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; Farnat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

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-----Original Message-----

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 9:50 AM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; Farnat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

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[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers
Desk: [REDACTED]
Cell: [REDACTED]
[REDACTED]@usace.army.mil
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delete the original message, and destroy any hard copies you may have created. Any misuse or unauthorized disclosure may result in both civil and criminal penalties.

-----Original Message-----

From: [REDACTED] NWD

Sent: Friday, May 20, 2011 9:23 AM

To: [REDACTED] NWD

Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD;

Farhat, Jody S NWD02; [REDACTED] NWD

Subject: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

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Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 11:50 AM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD;
NWD; Farhat, Jody S NWD02
Subject: RE: Revised Briefing (UNCLASSIFIED)

[REDACTED]

Thanks for sending your updated slides.

You can view your slides from the viewer at:

<https://egis.nwp.usace.army.mil/pls/apex/f?p=200:6:3597175069780256::NO>

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[REDACTED]@usace.army.smil.mil

Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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-----Original Message-----

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 9:23 AM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD;
Farhat, Jody S NWD02; [REDACTED] NWD
Subject: Revised Briefing (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED], I revised the presentation slightly on the attached if you can replace what I sent previously. Also, [REDACTED] and I talked about possibly having a rep from the National Weather Service River Forecast Center join the brief for a short (5 min total?) summary of expected weather and streamflows like they do for us at our weekly brief each Thurs. I called and they are standing by to do this, so can you please me know when they should plan to join in and if they want to show any graphics (they don't need to if it is a problem) should they do it via internet?

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 11:15 AM
To: Farhat, Jody S NWD02
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Ok. FYI, I have a meeting scheduled with the City of Bismarck this afternoon at 3:30. I'm going to meet with their City EM and tour some areas of concern, then meet with their Engineering folks. I'm also planning to meet with someone from Burleigh County...

-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 11:12 AM
To: [REDACTED] NWO
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Agree, but if they want a few days of 55 kcfs to prepare, we're not strongly opposed.

-----Original Message-----
From: [REDACTED] NWO
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I'm sure that Todd understands our position and my gut feeling is he'll support us, but I'm sure he's getting pressure from his boss. I think June forecast numbers may help him present the case to his boss? Lastly, just my opinion... I think coordination is important, but I'm not sure that we want the Chief of Staff making water management decisions?

P.S. FYI, it was kind of odd, but Col Ruch just called me. He asked if I need anything and said that he was going bring up some points this afternoon about why we didn't increase releases sooner...

-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 10:13 AM
To: [REDACTED] NWO
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Just left you a voice message. Sando called back. He talked to the chief of staff and they would like us to hold releases at 55 kcfs. We're going to update the monthly study and get

back to him to have better information on where we think we'll be headed on releases in June. Also trying to convey the concern about reaching the top of gates.

-----Original Message-----

From: Farhat, Jody S NWD02

Sent: Friday, May 20, 2011 9:08 AM

To: [REDACTED] NWO

Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02

Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED]
Todd Sando called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

NWO

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 11:05 AM
To: [REDACTED] NWD02; Farhat, Jody S NWD02; [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWD02
Subject: RE: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Folks,
I don't know the protocol or want to get in your business on all the data collection, but I feel it's important that we are communicating this information to the State Water Commission, as a minimum. I've asked [REDACTED]'s shop to take the lead in coordinating the data collection with the State. FYI, when I last spoke with [REDACTED] (SWC) he indicated that they'd assist in collecting data, such as water surface profiles.

I'd also think we should have the NWS in the loop on this since they deal with the river stages...

-----Original Message-----

From: [REDACTED] NWD02
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02; [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWD02
Subject: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

All,

I spoke with the Brad Sether of the ND USGS to verify their rating curve. We (Corps and USGS) are both showing a flow at Bismarck of about 50,000 cfs and a stage of 13.4 feet. The USGS measured the Missouri River at Bismarck twice yesterday and noted a significant negative shift (-1.30'). They believe their rating curve to be accurate. This compares to last fall's shift, which Brad feels is a more normal shift, of -0.30'. What that means is that the channel is (currently) less efficient than it was this fall/winter, likely due to backwater effects from Oahe pool levels. Unknown as to when the channel will return back to more normal conditions. The USGS plans to measure at Bismarck every other week, which is twice their norm.

Currently, not much is contributing from the tributaries between Garrison and Bismarck, so the release from Garrison is pretty much what we see at Bismarck (3 days, or so, later).

Current Bismarck rating (remember, this changes based on changing channel conditions):

13.0' = 47.6 kcfs
13.5' = 51.1 kcfs
14.0' = 55.1 kcfs
14.5' = 59.3 kcfs
15.0' = 63.7 kcfs

- [REDACTED]

[REDACTED]

[REDACTED]

Missouri River Basin Water Management,

Northwestern Division, USACE

402. [REDACTED]

402. [REDACTED] (fax)

-----Original Message-----

From: Farhat, Jody S NWD02

Sent: Friday, May 20, 2011 9:08 AM

To: [REDACTED] NWO

Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02

Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

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Jody

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: CENWD-EOC NWD
Sent: Friday, May 20, 2011 10:47 AM
To: [REDACTED] NWO; Farhat, Jody S NWD02
Cc: [REDACTED] NWD
Subject: Missouri River Basin Water Management/NWO Briefing for Brief to CG Today at 1230 (UNCLASSIFIED)

Jody & Kim,

Thanks for updating your slides.

You can view your slides from the viewer at:

<https://egis.nwp.usace.army.mil/pls/apex/f?p=200:6:3597175069780256::NO>

It is under the "NWD CMT Flood Briefings" folder on the left hand side of viewer.

Note: We have eastside briefing first to try and respect your time, "in case the meeting goes long"

[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers
Desk: [REDACTED]
Cell: [REDACTED]

[REDACTED]@usace.army.mil

[REDACTED]@usace.army.smil.mil

Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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From: [REDACTED] NWD
Sent: Friday, May 20, 2011 8:05 AM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; [REDACTED] NWD; Farhat, Jody S NWD02; [REDACTED] NWD
Subject: Columbia Basin Water Management Briefing for Brief to CG Today at 1230 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Attached is our file for this brief.

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02; [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWD02
Subject: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

All,

I spoke with the Brad Sether of the ND USGS to verify their rating curve. We (Corps and USGS) are both showing a flow at Bismarck of about 50,000 cfs and a stage of 13.4 feet. The USGS measured the Missouri River at Bismarck twice yesterday and noted a significant negative shift (-1.30'). They believe their rating curve to be accurate. This compares to last fall's shift, which Brad feels is a more normal shift, of -0.30'. What that means is that the channel is (currently) less efficient than it was this fall/winter, likely due to backwater effects from Oahe pool levels. Unknown as to when the channel will return back to more normal conditions. The USGS plans to measure at Bismarck every other week, which is twice their norm.

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14.0' = 55.1 kcfs
14.5' = 59.3 kcfs
15.0' = 63.7 kcfs

- [REDACTED]

[REDACTED], P.E.

[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE
402. [REDACTED]
402. [REDACTED] (fax)

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 9:08 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Todd Sando called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

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Todd

P.S. FYI, it was kind of odd, but Col Ruch just called me. He asked if I need anything and said that he was going bring up some points this afternoon about why we didn't increase releases sooner...

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Sent: Friday, May 20, 2011 10:13 AM
To: [REDACTED] NWO
Subject: RE: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Just left you a voice message. Sando called back. He talked to the chief of staff and they would like us to hold releases at 55 kcfs. We're going to update the monthly study and get back to him to have better information on where we think we'll be headed on releases in June. Also trying to convey the concern about reaching the top of gates.

-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Friday, May 20, 2011 9:08 AM
To: [REDACTED] NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]
Todd Sando called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Burke, Linda NWO

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 8:47 AM
To: Love, Raymond E MAJ NWD; [REDACTED] NWD; Farhat, Jody S NWD02
Cc: [REDACTED] NWD; [REDACTED] NWD
Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

MAJ Love: I am not exactly sure what EM uses as a definition of "areas for concern", but I think that we in WM typically define that as whether or not flood stage is being exceeded or will be exceeded. It is hard to apply a standard definition to this, as many times our judgment comes into play depending on a particular situation. There are other criteria that could come into play such as if we have a levee that is having problems at levels below flood stage, we have dam safety issues that affect WM such as at Howard Hanson, or other conditions. I am wondering if EM might think that area of concern mainly applies to their ability to adequately respond to the situation and if they can adequately respond then there is not cause for concern even if flood stage is being exceeded? I do think that this is a concern if the two organizations portray similar situations differently, and it would be helpful to discuss this further and also to pre-coordinate our respective slide presentations to see what each organization plans to say before hand when we are making them to the CG.

Jody: you have more experience with recent flood events on this topic so would be interested to hear your thoughts on the topic.

-----Original Message-----

From: Love, Raymond E MAJ NWD
Sent: Friday, May 20, 2011 6:22 AM
To: [REDACTED] NWD; Farhat, Jody S NWD02; [REDACTED] NWD
Subject: FW: Please release sitrep...thanks (UNCLASSIFIED)

ALCON-

I just wanted to make sure we are sharing information across Water Management and Emergency Management. Bottom line, we asked all the Emergency Managers to identify three things:

- 1) Locations of active flood fights
- 2) locations of advanced measures
- 3) locations of "areas of concern"

The purpose, is to build a data layer on the NWD Common Operating picture that shows this information regionally and clearly. We will show this today at the 12:30 flood update brief to the CG. I'll send you the consolidated one later, but for now, I want to send you the ones that I have for your situational awareness.

Finally, the "so what"" part of this, is that Water Management and Emergency Management need to be saying the same thing to the Command, so if NWP Emergency Management for example says they have "no areas of concern for flooding" then does CRBWM concur with that assessment? And should we more clearly define "areas of concern"? I think WM has a pretty good definition, but maybe one of you could tell me what your definition is, so I can clearly articulate it to the CG and be consistent with your assessment.....

[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers

Desk: [REDACTED]

Cell: [REDACTED]

[REDACTED]@usace.army.mil

[REDACTED]@usace.army.smil.mil

Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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-----Original Message-----

From: Thomas, Kimberly S NWO

Sent: Thursday, May 19, 2011 4:16 PM

To: Love, Raymond E MAJ NWD

Cc: [REDACTED] NWP

Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

Well here is a start.

Kimberly S. Thomas
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
402-995-2448 Office
402-490-5099 Blackberry
kimberly.s.thomas@usace.army.mil

-----Original Message-----

From: Love, Raymond E MAJ NWD

Sent: Thursday, May 19, 2011 5:40 PM

To: Thomas, Kimberly S NWO

Cc: [REDACTED] NWP

Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

The're not. But the spread sheet was due at 2pm today. I only asked for slides because I thought you may not have many and would mainly be a copy paste from Monday. Anyway, late today or first thing tomorrow for the spreadsheet so [REDACTED] has time to put in on viewer. Please send the spreadsheet directly to [REDACTED] (copied on the email) so he can get it loaded

MAJ Raymond Love
Contingency Operations Officer

Readiness and Contingency Operations

Northwestern Division

US Army Corps of Engineers

Desk: [REDACTED]

Cell: [REDACTED]

[REDACTED]@usace.army.mil

[REDACTED]@usace.army.smil.mil

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-----Original Message-----

From: [REDACTED] NWO

Sent: Thursday, May 19, 2011 3:26 PM

To: [REDACTED] NWD

Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

I thought they weren't due until 0930????

[REDACTED]
Chief, Readiness Branch

U.S. Army Corps of Engineers - Omaha District

1616 Capitol Ave., Ste 9000

Omaha, NE 68102

[REDACTED] Office

[REDACTED] Blackberry

[REDACTED]@usace.army.mil

-----Original Message-----

From: [REDACTED] NWD

Sent: Thursday, May 19, 2011 5:25 PM

To: [REDACTED] NWO

Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Do you have your slides for tomorrow? Also, I still need that spreadsheet I sent you

[REDACTED]
Contingency Operations Officer

Readiness and Contingency Operations

Northwestern Division

US Army Corps of Engineers

Desk: [REDACTED]

Cell: [REDACTED]

[REDACTED]@usace.army.mil

[REDACTED]@usace.army.smil.mil

Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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-----Original Message-----

From: CENWD-EOC NWD

Sent: Thursday, May 19, 2011 3:09 PM

To: DLL-CENWD-DDE

Subject: FW: Please release sitrep...thanks (UNCLASSIFIED)

From: [REDACTED] NWO

Sent: Thursday, May 19, 2011 3:08:34 PM

To: CENWD-EOC NWD

Subject: Please release sitrep...thanks (UNCLASSIFIED) Auto forwarded by a Rule

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102

[REDACTED] Office

[REDACTED] Blackberry

[REDACTED]@usace.army.mil

Classification: UNCLASSIFIED

Caveats: FOUO

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Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 8:42 AM
To: Farhat, Jody S NWD02
Subject: Notification to State (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
I did get in touch with [REDACTED]. He was getting ready for a Devils Lake Meeting. There was a lot of sighing on his end... He was going to give [REDACTED] a call and have her track down Todd to let him know. [REDACTED] was also going to notify ND DES. I think we need to get a press release out ASAP and let people know that our plans have changed. The press release should go into some detail regarding "why"...

[REDACTED]

[REDACTED]

[REDACTED] Operations Project Manager

Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO

NWO

From: [REDACTED] NWD
Sent: Friday, May 20, 2011 8:22 AM
To: [REDACTED] NWD; Farhat, Jody S NWD02; [REDACTED] NWD
Subject: FW: Please release sitrep...thanks (UNCLASSIFIED)
Attachments: eGIS Flood fight Update SlideNWO.xlsx

ALCON-

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- 1) Locations of active flood fights
- 2) locations of advanced measures
- 3) locations of "areas of concern"

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[REDACTED]
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Northwestern Division
US Army Corps of Engineers
Desk: [REDACTED]
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Cc: [REDACTED] NWP
Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Well here is a start.

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
[REDACTED] Office
[REDACTED] Blackberry
[REDACTED]@usace.army.mil

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Cc: [REDACTED] NWP
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From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 3:26 PM
To: [REDACTED] NWD
Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

I thought they weren't due until 0930????

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
[REDACTED] Office
[REDACTED] Blackberry
[REDACTED]@usace.army.mil

-----Original Message-----

From: [REDACTED] NWD
Sent: Thursday, May 19, 2011 5:25 PM
To: [REDACTED] NWO
Subject: RE: Please release sitrep...thanks (UNCLASSIFIED)

Do you have your slides for tomorrow? Also, I still need that spreadsheet I sent you

[REDACTED]
Contingency Operations Officer
Readiness and Contingency Operations
Northwestern Division
US Army Corps of Engineers
Desk: [REDACTED]
Cell: [REDACTED]
[REDACTED]@usace.army.mil
[REDACTED]@usace.army.smil.mil
Emergency Satellite Phone: [REDACTED] Emergency Cell: [REDACTED]

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-----Original Message-----

From: CENWD-EOC NWD
Sent: Thursday, May 19, 2011 3:09 PM
To: DLL-CENWD-DDE
Subject: FW: Please release sitrep...thanks (UNCLASSIFIED)

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 3:08:34 PM
To: CENWD-EOC NWD
Subject: Please release sitrep...thanks (UNCLASSIFIED) Auto forwarded by a Rule

Classification: UNCLASSIFIED
Caveats: FOUO

Kimberly S. Thomas
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
402-995-2448 Office
402-490-5099 Blackberry
kimberly.s.thomas@usace.army.mil

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

NWO Flood Status

	Location (City)	Operation DTG (local time)	Situation	Funds received to date	# of sandbags issued	Personnel Working
Flood Fight						
1	North Platte, NE					
	Henry, NE					
	Morill, NE					
	Mitchell, NE					
	Scottsbluff, NE					
	Terrytown, NE					
	Gering, NE					
	Minatare, NE					
	McGrew, NE					
	Bridgeport, NE					
	Lisco, NE					
	Lewellen, NE					
2						
2						
2						
2						
3	Advance Measures					
	Laramie, WY					
	Medicine Bow, WY					
	Elk Mountain, WY					
	Saratoga, WY					
	Hanna, WY					
	Sinclair, WY					
	Lander, WY					
	Fort Washakie, WY					
	Johnstown, WY					
	Arapahoe, WY					
	Riverton, WY					
	Thermoplis, WY					
	Crowheart, WY					
	Dubois, WY					
	Worland, WY					
	Ten Sleep, WY					
	Manderson, WY					
	Greybull, WY					
	Lovell, WY					
4	Dayton, WY					
5						
4	Ranchester, WY					
5	Buffalo, WY					
4	Kaycee, WY					
	Casper, WY					
	Glenrock, WY					
	Douglas, WY					
	Hulett, WY					
	Glendo, WY					
	Fort Laramie, WY					
	Torrington, WY					
	Wheatland, WY					

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 7:11 PM
To: [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02
Subject: Re: Bismarck measurement (UNCLASSIFIED)

Kelly Casteel with the State Water Commission will be contacting [REDACTED]. They are wanting flow measurements as well as surface profiles. They are willing to partner on these efforts. Please let me know if there are additional funding needs?

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: [REDACTED] NWD02
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO;
Farhat, Jody S NWD02
Sent: Thu May 19 18:58:05 2011
Subject: Re: Bismarck measurement (UNCLASSIFIED)

[REDACTED]
FYI. The USGS website shows 2 measurements at Bismarck today (May 19). The gage height was 13.20, with flows of 48,700 and 48,900.

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: [REDACTED] NWO
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO
Sent: Thu May 19 16:01:35 2011
Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
I also have a call into Bruce and have not heard back from him? I'd like to go with the USGS measurements at the Bismarck gage next week, after we stabilize at the 55,000 cfs releases. As far as taking measurements at Garrison goes, I think we should visit with Steve to see what he thinks they can do? If it's going to be very difficult for them to get a good reading and they'll have more than a 5% margin of error, I'm not sure what we gain by taking the readings?

-----Original Message-----

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 3:57 PM
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO
Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

I have not been able to reach Bruce Engelhardt by phone. But I have a message in to him. The USGS flow measurements should address concerns about the rating curve at the Bismarck gage.

I heard about some concerns with the Garrison tunnel rating curve. Did we need some flow measurements downstream of the outlet works? This can be difficult at best because it will take several measurements to establish a good rating curve and there is error involved with each measurement, but they would at least provide an estimate of what is coming out of the outlet works. Let me know if I should talk to the USGS about this and how many measurements would be needed.

[REDACTED]
US Army Corps of Engineers
Water Control and Water Quality Section
[REDACTED]
[REDACTED]
[REDACTED]@usace.army.mil

-----Original Message-----

From: [REDACTED] NWO

Sent: Monday, May 16, 2011 9:21 PM

To: [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED]
NWO

Cc: Allen Schlag

Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

All,
I had several e-mails and a voice message on this today. I'll still be participating in the annual inspection at Williston tomorrow, so will follow up on this issue later in the week. So far, it sounds like folks want river elevations. I'm assuming that the surface profiles being done by Dan's shop will meet this request.

Several folks are questioning the rating curve for the Bismarck gage. I'm assuming that the USGS measurements will be utilized to address this issue.

I don't "speak the language" on all the hydro stuff, so if my statements are not accurate, please let me know. I'll also touch base with the SWC, unless you want to talk with them Brian? I'm fine with that too. If you want to visit with them to see what they have to offer, I suggest contacting Bruce Engelhardt. Let me know if you find time to do this? If not, I'll make contact with him later this week.

-----Original Message-----

From: [REDACTED] B NWO

Sent: Monday, May 16, 2011 2:29 PM

To: [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO

Subject: RE: Water Surface Profile (UNCLASSIFIED)

Not sure on the communication chain, and I would prefer to keep Sed Section role low profile. Who is taking the lead on replying to Mr. Gunsch?

-----Original Message-----

From: [REDACTED] NWO
Sent: Saturday, May 14, 2011 12:21 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO
Subject: FW: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

All,
I did talk with the State Water Commission about this. There are multiple entities interested in obtaining updated flow and stage data on the Missouri River at Bismarck. I know that at Jamestown, we hired the USGS to complete multiple readings for us. I'm not sure about the logistics on this but concur that this would be a great opportunity to update our data, once we stabilize at the higher flows.

The State Water Commission indicated that they'd be willing to assist however they could. I do not understand the logistics of this or how we make it happen but strongly support the idea. Please let me know if you need additional funding or if you need me to coordinate some issues with the State?

-----Original Message-----

From: Michael Gunsch [mailto:mgunsch@houstoneng.com]
Sent: Saturday, May 14, 2011 11:44 AM
To: [REDACTED] NWD02
Cc: [REDACTED] NWO; Fleck Terry (tfleck@attitudedr.com); Gailen Narum; Craig Odenbach; Sando, Todd S. (tsando@nd.gov); [REDACTED] NWO; Wade Bachmeier; Bill Robinson (brobinson@northlandfinancial.net); Bruce W. Engelhardt (bengelhardt@nd.gov); kcasteel@nd.gov
Subject: RE: Water Surface Profile

[REDACTED] and [REDACTED]:

Given the high flows on the Missouri of extended duration the Burleigh County Water Resource District would like to have the COE obtain elevation data along the river for these flow conditions. This is an important opportunity to gather information on the system conveyance and various flood stages. As previously noted the rating curves at Bismarck indicate elevations of 6 inches or more higher for these designated flows. How this extends to larger flows is unknown, but is critical in future management of the Missouri River floodplain, and to forecast potential high flow impacts. Therefore, this information needs to be obtained.

I understand the COE has obtained elevation information in the past, but the timing of these flows makes it critical to gather data as the flows occur and change. The question is who is going to gather this information? Understand the NDSWC might be interested in assisting. Let me know what is being planned and when it will be completed.

Thanks,

Michael H. Gunsch, PE

Senior Project Manager/Principal

Description: Description: cid:021080921@26012009-10E2

3712 Lockport Street

Bismarck, ND 58503

Phone (701) 323-0200

<http://www.houstonengineeringinc.com/> <<http://www.houstonengineeringinc.com/>>

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Fax (701) 323-0300

e-mail mgunsch@houstoneng.com <<mailto:mgunsch@houstonengineeringinc.com>>

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Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Thursday, May 19, 2011 6:58 PM
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02
Subject: Re: Bismarck measurement (UNCLASSIFIED)

[REDACTED]
FYI. The USGS website shows 2 measurements at Bismarck today (May 19). The gage height was 13.20, with flows of 48,700 and 48,900.

[REDACTED]

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: [REDACTED] NWO
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO
Sent: Thu May 19 16:01:35 2011
Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
I also have a call into Bruce and have not heard back from him? I'd like to go with the USGS measurements at the Bismarck gage next week, after we stabilize at the 55,000 cfs releases. As far as taking measurements at Garrison goes, I think we should visit with Steve to see what he thinks they can do? If it's going to be very difficult for them to get a good reading and they'll have more than a 5% margin of error, I'm not sure what we gain by taking the readings?

[REDACTED]
-----Original Message-----

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 3:57 PM
To: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO
Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

I have not been able to reach Bruce Engelhardt by phone. But I have a message in to him. The USGS flow measurements should address concerns about the rating curve at the Bismarck gage.

I heard about some concerns with the Garrison tunnel rating curve. Did we need some flow measurements downstream of the outlet works? This can be difficult at best because it will take several measurements to establish a good rating curve and there is error involved with each measurement, but they would at least provide an estimate of what is coming out of the outlet works. Let me know if I should talk to the USGS about this and how many measurements would be needed.

US Army Corps of Engineers
Water Control and Water Quality Section

[REDACTED]
[REDACTED]
[REDACTED]@usace.army.mil

-----Original Message-----

From: [REDACTED] NWO

Sent: Monday, May 16, 2011 9:21 PM

To: [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO

Cc: Allen Schlag

Subject: RE: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

All,
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-----Original Message-----

From: [REDACTED] NWO

Sent: Monday, May 16, 2011 2:29 PM

To: [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO

Subject: RE: Water Surface Profile (UNCLASSIFIED)

Not sure on the communication chain, and I would prefer to keep Sed Section role low profile. Who is taking the lead on replying to Mr. Gunsch?

-----Original Message-----

From: [REDACTED] NWO

Sent: Saturday, May 14, 2011 12:21 PM

To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO

Cc: [REDACTED] NWO

Subject: FW: Water Surface Profile (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

All,

I did talk with the State Water Commission about this. There are multiple entities interested in obtaining updated flow and stage data on the Missouri River at Bismarck. I know that at Jamestown, we hired the USGS to complete multiple readings for us. I'm not sure about the logistics on this but concur that this would be a great opportunity to update our data, once we stabilize at the higher flows.

The State Water Commission indicated that they'd be willing to assist however they could. I do not understand the logistics of this or how we make it happen but strongly support the idea. Please let me know if you need additional funding or if you need me to coordinate some issues with the State?

Todd

-----Original Message-----

From: Michael Gunsch [mailto:mgunsch@houstoneng.com]

Sent: Saturday, May 14, 2011 11:44 AM

To: [REDACTED] NWD02

Cc: [REDACTED] NWO; Fleck Terry (tfleck@attitudedr.com); Gailen Narum; Craig Odenbach; Sando, Todd S. (tsando@nd.gov); [REDACTED] NWO; Wade Bachmeier; Bill Robinson (brobinson@northlandfinancial.net); Bruce W. Engelhardt (bengelhardt@nd.gov); kcasteel@nd.gov
Subject: RE: Water Surface Profile

[REDACTED] and [REDACTED]

Given the high flows on the Missouri of extended duration the Burleigh County Water Resource District would like to have the COE obtain elevation data along the river for these flow conditions. This is an important opportunity to gather information on the system conveyance and various flood stages. As previously noted the rating curves at Bismarck indicate elevations of 6 inches or more higher for these designated flows. How this extends to larger flows is unknown, but is critical in future management of the Missouri River floodplain, and to forecast potential high flow impacts. Therefore, this information needs to be obtained.

I understand the COE has obtained elevation information in the past, but the timing of these flows makes it critical to gather data as the flows occur and change. The question is who is going to gather this information? Understand the NDSWC might be interested in assisting. Let me know what is being planned and when it will be completed.

Thanks,

Michael H. Gunsch, PE

Senior Project Manager/Principal

Description: Description: cid:021080921@26012009-10E2
3712 Lockport Street
Bismarck, ND 58503
Phone (701) 323-0200

<http://www.houstonengineeringinc.com/> <<http://www.houstonengineeringinc.com/>>

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Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 6:20 PM
To: Farhat, Jody S NWD02
Subject: Re: Daily Bulletin? (UNCLASSIFIED)

Thanks Jody,

I appreciate you tracking this down. FYI I did visit with Bruce Engelhardt and Kelly Casteel about reducing releases from Garrison for a rain event. Bruce said that he'd discussed this with Todd Sando earlier today and they concur that we should continue with scheduled increases. They too are concerned with the snow pack. So I guess that's our position for tomorrow's call in case it comes up tomorrow.

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: Farhat, Jody S NWD02
To: Lindquist, Todd J NWO
Sent: Thu May 19 16:23:03 2011
Subject: RE: Daily Bulletin? (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] - We located the problem. Apparently a diversion from the project (which started on 1 May) was being recorded in the wrong field in the database. [REDACTED] and [REDACTED] have resolved the issue and what we refer to as "The Reservoir Bulletin" should have the correct releases from now on! Thanks for bringing it to our attention. We certainly don't need to be putting out our own misinformation, there's enough of it without us contributing to the mess.

Thanks,
Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Thursday, May 19, 2011 2:26 PM
To: Farhat, Jody S NWD02
Subject: Daily Bulletin? (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
I apologize if I am not using the right terminology! The attached "daily bulletin" is what my staff is pulling off the website. They are asking why the Garrison discharges are running higher than what we say we're releasing?

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 5:32 PM
To: [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED] D NWO;
[REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: FW: Introductions

All: here is the response I forwarded to Spencer Gray in Sen Baucus's office. Thanks to all for the assistance in the response.

Have a great weekend.

Kayla

-----Original Message-----

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 5:31 PM
To: 'Gray, Spencer (Baucus)'
Subject: RE: Introductions

Spencer,

As follow up to your questions on the Ft. Peck marina.

The marina operator has called our project office to see if there is anything we could do to help him, so we are aware of the concerns.

However, the language of the lease agreement (DACW45-1-93-6035) between the State of Montana and the Corps of Engineers for the Hell Creek State Park is as follows:

" 14. RIGHT TO ENTER AND FLOOD

a. The right is reserved to the United States, its officers, agents, and employees to enter upon the premises at any time and for any purpose necessary or convenient in connection with Government work; to make inspections; to remove timber or other material, except property of the Lessee; to flood the premises; to manipulate the level of the lake or pool in any manner whatsoever; and/or to make any other use of the land as may be necessary in connection with project purposes, and the Lessee shall have no claim for damages on account thereof against the United States or any officer, agent, or employee.

b. The Lessee expressly agrees to make no claim under flood insurance issued under any Federal Government program for loss to any property of the Lessee located on the premises which arises from or is incident to the flooding of the premises by the Government."

The primary lease agreement was entered into pursuant to a Project Cooperation Agreement signed in 1994 approving the cost shared construction of a potable water treatment and distribution facility. The lease runs for a period ending 30 April 2021. The current lease replaced a previous lease for the same area between the parties. We are not familiar with the agreement between the State, as our primary lessee, and Clint Thomas, who apparently is a third party concession operator for the State. Our records show the last approved concession operator to be Jim and Marilyn Pankey that was approved in 2000 for a period ending 31 Dec 2018. We do not have a copy of a new concession agreement if one was signed with Mr. Thomas.

The Pankey concession agreement was approved by the District and provides that the agreement is "subject to the rules, regulations, and restrictions of the U.S. Army Corps of Engineers." It also recognizes that the area included in the concession agreement is leased to the State from the Army.

Bottom line, the lease is clear that the Corps has the right to manipulate the Lake level and the lessee and its concessionaire will hold the Government harmless from any damage created as a result.

Additionally, we don't track inundated structures or notify property owners. We post our reservoir forecasts on our web site and put out regular monthly press releases, but it's up to the property owner to keep abreast of the situation. The reservoir is not forecasted to exceed previous records.

For your reference, the link below takes you to webcam showing docks and steps to gas dock at Hell Creek Marina.

<http://www.walleyesforever.com/webcams/fortpeckhellcreekcam.html>

Please let me know if you need any further clarification or have any additional questions. Enjoy your weekend.

-----Original Message-----

From: Gray, Spencer (Baucus) [mailto:Spencer_Gray@baucus.senate.gov]

Sent: Wednesday, May 18, 2011 10:40 AM

To: [REDACTED] NWO

Subject: RE: Introductions

Thanks, [REDACTED]

I appreciate you checking on the cabin sales and I'm gathering the word here on the Bostick nomination.

One other Fort Peck issue came up today (details pasted below)--it sounds like Corps-initiated action is impacting a constituent who owns a marina on Fort Peck reservoir. Are you aware of Corps policy about this type of situation and/or avenues that Clint and other folks could pursue for reimbursement or appeals?

Would property owners along the reservoir have entered into a leasing or property contract that spelled out the risks and liabilities related to Corps responsibilities to control downstream flooding? Thanks for guidance on this. We'd like to get him word on next steps asap.

====

I just got off the phone with Clint Thomas, who owns Hell Creek Marina on the Fort Peck Reservoir. The Army Corps of Engineers is filling the reservoir to stave off flooding downstream. They are, according to Clint, taking it to the highest it has ever been, approximately 8-9 feet higher than it is now. Clint is worried first about losing shoreline, but next about losing his buildings as the water gets under them and erodes the soil/sand away. He says he could stabilize his shoreline with rocks, but that it will cost \$30-\$40K and he doesn't have the money (though he has the equipment, the permit, and the time to devote to doing it). He understands that the Corps has to raise the water level, but says they can't help him protect his structures. He says Rock Creek marina and Crooked Creek will

be in the same position as he is, losing structures - and that insurance won't cover it because it is a manmade flood, not a natural disaster.

-----Original Message-----

From: [REDACTED] NWO [mailto:[REDACTED]@usace.army.mil]
Sent: Tuesday, May 17, 2011 2:42 PM
To: Gray, Spencer (Baucus)
Subject: Introductions

Spencer - great to speak with you and welcome back to the Senator's office. My contact info is below. I will track down the Ft. Peck cabin sales info and get back to you. Additionally, if you receive any new info on LTG Bostick's confirmation hearing with the Senate EPW on 25 May as to whether or not Senator Baucus plans to attend and what questions he may have, I would greatly appreciate any insight so we can prepare for a fruitful conversation at the hearing.

Looking forward to working with you,

[REDACTED] Uptmor
Chief of Planning
Congressional Liaison
US Army Corps of Engineers
Omaha District
1616 Capitol Avenue
Omaha, NE 68102-4901
[REDACTED] (o)
[REDACTED] (c)

[REDACTED] IWO

From: [REDACTED] S NWO
Sent: Friday, May 20, 2011 5:18 PM
To: [REDACTED] NWO; [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWO
Cc: Oldham, Margaret NWO
Subject: RE: Riverwatch Daily #8 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Kevin,

SD called today wondering if they could get this daily as well, we could email this to the SD PAO folks as well, can't we?

SD would also like to join the call, is everyone ok with that?

Thanks,

[REDACTED]
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
[REDACTED] Office
[REDACTED] Blackberry
[REDACTED]@usace.army.mil

-----Original Message-----

From: [REDACTED] NWO
Sent: Friday, May 20, 2011 3:01 PM
To: Fong, Cecily S.; [REDACTED] NWO; Farhat, Jody S NWD02; [REDACTED] NWO
Cc: Oldham, Margaret NWO
Subject: Riverwatch Daily #8 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

8 attached

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: ██████████ NWO
Sent: Friday, May 20, 2011 4:53 PM
To: DLL-CENWO-EOC CMT-ALL ██████████ NWO
Cc: CENWD-EOC NWD, ██████████ NWO; ██████████ HQ02; ██████████
██████████ NWK
Subject: Flood Update #65 (UNCLASSIFIED)
Attachments: TempOutlook_20May11.xlsx; Day1QPF20May11.gif; Day2QPF20May11.gif;
Day3QPF20May11.gif; 24hrPrecip20May11.jpg; dailybull 20.5.11.pdf; 5.20.11
TribResSumm.pdf; Upper Missouri Snow 5.20.11.pdf; Upper Yellowstone Snow 5.20.11.pdf;
Upper North Platte Snow 5.20.11.pdf; South Platte Snow 5.20.11.pdf; Pipestem Pool Plot
5.20.11.pdf; Jamestown Pool Plot 5.20.11.pdf

Classification: UNCLASSIFIED
Caveats: FOUO

****EMERGENCY OPERATIONS****

1. Situation:

Extensive and heavy rain currently moving throughout the District and forecasted to continue. New record stage at North Platte, NE and forecasted to go higher, currently evaluating infrastructure that will be affected.

Mountain snowpack on May 20, 2011 is 120% of the 30-year peak historical average. The Upper Missouri River snowpack is currently 111%, the Upper Yellowstone is 126%, the Upper North Platte Basin is 145% and the South Platte Basin is 138% of the 30-year peak historical average. Snow Water Equivalents at these stations have crested and are receding. Water Control is monitoring the high basin snowpack and is coordinating with appropriate agencies.

COL Ruch and staff will meet with State EM personnel from both NE and WY on 23 May 2011 including the NE Lieutenant Governor in North Platte, NE and Cheyenne, WY. The team will discuss the current situation and forecast.

All Missouri Mainstem Dams(Ft. Peck, Garrison, Oahe, Ft. Randall, and Gavins), with the exception of Big Bend, are passing water through either their spillway, flood tunnels, or outlet works in addition to the water through the powerhouse. Garrison is 0.4' from exclusive flood control and Oahe is 0.1' from exclusive flood control.

Participated in NWD CMT briefing BG McMahon on the current and forecasted flooding in the NWO District.

Alabama Tornadoes: ██████████ is currently deployed to support the debris SME and ██████████
██████████ is deployed to provide PAO support to MVS.

2. Weather:

2a. Past Precipitation:

Precipitation fell throughout the District for the 24 hours ending 7:00 am 20 May 2011 except for the Rocky Mountains in Montana. National Weather Service estimated rainfall indicates southwestern South Dakota generally had 2.0-2.5" of rain with a 2.5-3.0" center over the Black Hills and the Belle Fourche and Little Missouri Rivers north of the Black Hills. Portions of the sandhills in Nebraska had 1.0-1.5" of rain. Another band extended from north central Kansas, through Lincoln, Omaha, and Sioux City with general amounts of 1.5-2.5" with a 5.0-6.0" center over north central Kansas.

2b. Future Precipitation:

The day 1 QPF (700 hours Friday to 700 hours Saturday) A large band of 0.75-1.0" of rainfall extending generally along the Missouri River from above Fort Peck to Rulo. A nearly 2.0" center is shown over the Upper Missouri and Yellowstone Rivers.

The day 2 QPF (700 hours Saturday to 700 hours Sunday) The same band of precipitation moves eastward with the center over eastern Iowa, the upper James River in North Dakota, and the upper Milk River in Montana. Amounts are generally 0.1-1.0".

The day 3 QPF (from 700 hours Sunday to 700 hours Monday) The storm has progressed north and east, with up to 0.1" over most of South Dakota, and .1-.25" over most of North Dakota with up to 0.5" over the James River.

2c. Temperatures:

Attached is a spreadsheet with the high and low temperatures for the next 6 days at Billings, MT; Cody, WY; Sheridan, WY; Saratoga, WY; and Casper, WY. High temperatures are in the 50s today at these locations, warming to the 60s by Sunday, then 50s by Tuesday. Lows are in the mid 30s at Saratoga, WY and generally low 40s at the other stations.

3. Hydro Status:

3a. River/Current Stage/Forecast Stage/Date of Peak:

North Dakota

- * James River at Jamestown/11.6'(1,850 cfs)/steady
- * James River at LaMoure/11.5'/steady

Nebraska

- * North Platte River at North Platte/6.82'/7.1'(4380 cfs)/May 24
- * North Platte River at State Line/5.89
- * Missouri River at Omaha/25.1 Up 0.1'
- * Missouri River at NE City/19.30' Down 0.1'
- * Missouri River at Brownville/35.00' Down 0.2'
- * Missouri River at Rulo/18.4' Down 0.2'

3.b Reservoirs:

The Bureau of Reclamation's Glendo Reservoir (WY) is at elevation 4629.1 ft msl with 87% of the multipurpose pool occupied. The USBR May 1 forecast is for over 2 million acre-feet of runoff into the North Platte Basin, 287% of normal.

Pipestem Reservoir (ND) rose 0.12' yesterday to elevation 1486.52 ft-msl. Yesterday's daily inflows were 295 cfs and the release was 200 cfs. 69.9% of the flood pool is occupied.

Jamestown Reservoir (ND) fell 0.21' yesterday to elevation 1449.52 ft-msl. The pool has dropped about 1.8 feet from its crest of 1451.3 ft-msl. Yesterday's daily inflows were 368 cfs. Releases were 1600 cfs. 70.7% of the flood pool is occupied. The combined release from both dams is 1,800 cfs.

Fort Peck Dam (MT)

Pool Elevation: 2242.90 ft-msl
24 hr change: 0.13'
Inflow: 34,000 cfs
Release: 19,700 cfs

Garrison Dam (ND)

Pool Elevation: 1849.58 ft-msl
24 hr change: 0.01'
Inflow: 63,000 cfs
Release: 52,800 cfs

Oahe Dam (SD)
Pool Elevation: 1616.95 ft-msl
24 hr change: 0.08'
Inflow: 61,000 cfs
Release: 52,500 cfs

Big Bend Dam (SD)
Pool Elevation: 1420.02 ft-msl
24 hr change: 0.13
Inflow: 49,000 cfs
Release: 45,400 cfs

Fort Randall Dam (SD)
Pool Elevation: 1354.95 ft-msl
24 hr change: -0.21'
Inflow: 52,000 cfs
Release: 56,900 cfs

Gavin's Point Dam (SD)
Pool Elevation: 1205.76 ft-msl
24 hr change: -0.03
Inflow: 57,000 cfs
Release: 57,000 cfs

4.a Emergency Operations:

4.a.1 Nebraska:

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro), deployed yesterday to provide technical assistance to the communities of Bridgeport, Lewellen, and North Platte along the North Platte River Basin. The team completed the inspection of the levee in Bridgeport. They presented their findings and recommendations to repair the deficiencies in the local levee(not Federal) to the city officials and Tom Hayden, Nebraska DNR, this morning.

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro) deployed today to provide assistance in communities upstream of Lewellen, which includes Henry, Morill, Mitchell, Scottsbluff, Terrytown, Gering, Minatare, McGrew, and Lisco. They met with Scottsbluff officials this afternoon to gather contact information for communities within the County.

4.a.2 Montana - No Change

4.a.3 North Dakota - Participated in ongoing call with the North Dakota stakeholders to include: Cities, Counties, ND DES, and State Water Commission. The call discusses the releases from the reservoirs as well as forecasted releases.

4.a.4 South Dakota - NWO personnel, [REDACTED]s (Geotech) and [REDACTED] (Hydro) deployed today to provide technical assistance to the City of Bristol. The city is asking for help in determining what could be done, what needs to be done or steps the city should strive for to decrease or eliminate the possible flooding problems from three sloughs that are now lake size bodies that drain through the storm sewer system in town.

4.b Funding:

- * Total Code 200 Funding received to date for this event: \$1,762,425
- * Total Code 200 Funding revoked to date for this event: \$2,600,000
- * Class 219 - Emergency Operations - Direct Assistance - \$250,000 - WAD and FAD received

3/14/2011

* Class 219 - Emergency Operations - Direct Assistance - \$3.825M - WAD received 03/15/11.
FAD received 03/16/11.
* Class 219 - Additional Funds Request on 24 March - \$231,425 - WAD and FAD received
03/24/11.
* Class 219 - Emergency Operations - Direct Assistance - \$2.5M revoked - 4/13/11
* Class 219 - Emergency Operations - Direct Assistance - \$100k revoked - 4/22/11
* Class 210 - Response Operations - Alabama Tornadoes - \$56k - MIPR - 4/30/11
* Class 210 - Response Operations - Alabama Tornadoes - \$25k - Request and received for
EOC Operations and deployments on 4/30/11

4.c Number of Personnel Supporting EOC Operations: 15

4.d EOC Activation - Level III - Partial Activation(Hours: 0700 to 1700)

****ADVANCE MEASURES****

1. Situation:

Currently monitoring high snow water equivalents in WY and MT.

2. Advance Measures:

2.a.2 WYOMING - The State of Wyoming added an additional location at Ten Sleep for technical assistance, this has been completed. Additionally, USACE personnel are working the technical assistance request from the Wind River Reservation. The 8 initial assessments will be completed on Monday, 23 May.

2.b Funding:

* Total Code 500 Funding received to date: \$787,904
* Class 520 Funding - Advance Measures - Technical assistance - \$100K. WAD and FAD received on 3/2/11.
* Class 52A Additional Request for Funding - Advance Measures - Technical assistance - \$100K. WAD and FAD received on 3/10/11.
* Class 520 Additional Request for Funding - Advance Measures - Technical assistance - \$101,640. WAD and FAD received on 3/24/11.
* Class 519 Funding - Advance Measures - Direct Assistance - \$376,264. WAD and FAD received on 3/28/11.
* Class 520 Funding - Advance Measures - Technical assistance - \$110k - FAD received on 05/12/11.

2.c Number of Personnel Supporting Advance Measures EOC Operations: 10

3.c EOC Activation - Level III - Partial Activation(Hours: 0700 to 1700)

[REDACTED]
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Classification: UNCLASSIFIED

6 Day Forecast Temperatures (High/Low)

Location	Fri 20-May	Sat 21-May	Sun 22-May	Mon 23-May	Tues 24-May	Wed 25-May
Billings, MT	55/45	56/44	63/46	57/44	52/42	60/43
Cody, WY	50/42	61/42	66/44	58/43	52/41	56/41
Sheridan, WY	56/43	47/43	61/45	58/43	53/39	57/41
Saratoga, WY	53/36	59/36	64/37	61/37	59/37	54/35
Casper, WY	53/41	61/42	66/42	61/42	58/39	46/39

**Operational Summary
Omaha District Tributary and Missouri River Mainstem Reservoirs
May 20, 2011**

**Water Control and Water Quality Section
Hydrologic Engineering Branch**

Detailed Summary

Mountain Snowpack

Mountain snowpack on May 20, 2011 is 120% of the 30-year peak historical average. The Upper Missouri River snowpack is currently 111%, the Upper Yellowstone is 126%, the Upper North Platte Basin is 145% and the South Platte Basin is 138% of the 30-year peak historical average. Snow Water Equivalents at these stations have crested and are receding. Water Control is monitoring the high basin snowpack and is coordinating with appropriate agencies.

North Platte

The Glendo Reservoir elevation is 4629.1 ft msl with 87% of the multipurpose pool occupied. The Bureau of Reclamation has evacuated storage from the North Platte system of reservoirs in anticipation of the high inflows from the much above normal mountain snowpack in the Upper North Platte and Laramie River Basins. Agency and stakeholder conference calls began May 6 to coordinate the high releases along the North Platte River.

Fort Peck, Garrison and Oahe

Fort Peck Lake is at elevation 2242.9 ft msl, 3.1 feet from the base of the exclusive flood control pool. Lake Sakakawea's elevation is 1849.6 ft msl, only 0.4 feet from the base of exclusive. Lake Oahe is at the base of exclusive at elevation 1617.0 ft msl. Top of exclusive is 1620.0 ft msl. The Gavins Point spillway releases were increased by 1,000 cfs on 19 May for a combined release of 57,500 cfs.

Jamestown/Pipestem

The Jamestown/Pipestem combined reservoir release rate has been held at a level of approximately 1800 cfs since April 17. The Corps has completed agency coordination concerning the long term release schedule for Jamestown and Pipestem Reservoirs. Without significant additional rainfall, combined releases at 1800 cfs will be made until early July, and then gradually ramped down with complete evacuation of flood storage by late August. All agencies favored a fast evacuation of storage, with the exception of Lamoure County, where the golf course near Grand Rapids is partially under water.

Omaha District Projects – Routine Activities

Bear Creek Reservoir.

Normal Operations. Bear Creek is releasing inflow with the pool currently at elevation 5558.7 ft msl, slightly above the top of the multipurpose pool.

Bowman-Haley Dam and Reservoir, Bowman, ND

The flood pool continues to come down with 0.6% of the flood control occupied at elevation 2755.05 ft msl. It is in a fill and spill operation with the gates open.

Bull Hook – Scott Coulee Dams.

Dry detention dams – no permanent storage.

Cedar Canyon Dam (Red Dale Gulch)

Dry detention dam – no permanent storage.

Chatfield Reservoir.

Normal operations. The multipurpose pool is 98% occupied with the reservoir at elevation 5431.7 ft msl, 0.3 feet below the top of the conservation pool. The gates were shut on May 2 and there is no release at this time.

Cherry Creek Reservoir.

Normal operations. The multipurpose pool is 100% occupied with the reservoir at elevation 5550.0 ft msl, the top of the conservation pool. The release is currently 15 cfs for water rights.

Cottonwood Springs Dam and Lake.

The pool is currently at elevation 3856.5 ft msl, 18.5 feet below the top of the conservation pool with 0 cfs release.

Cold Brook Reservoir.

The Cold Brook drawdown was completed on April 25th. The current pool elevation is 3582.4 ft-msl. Small releases will be made as necessary to maintain the pool at this elevation.

Kelly Road and Westerly Creek Dam

Dry detention dams – no permanent storage.

Papillion Creek Dam No. 11 – Cunningham Dam

The reservoir was drawn down 3 feet in October and November of 2010 for rehabilitation work along the shoreline. On February 28 the gate was closed and was allowed to begin refilling. The multi-purpose pool was filled on April 22, 2011. Currently, the pool elevation is at 1121.4 ft msl and is in fill and spill operations.

Papillion Creek Dam No. 16 – Standing Bear Dam and Lake

Project is releasing 5 cfs in fill and spill operations.

Papillion Creek Dam No. 18 –Zorinsky Dam and Lake

Current drawdown elevation for zebra mussel control is 1091.7 ft msl, 18.3 feet below the conservation pool. A conference call with the Nebraska Game and Parks Commission and the City of Omaha was held March 29 and a possible option for rotenone application in June to kill remaining fish was discussed. If Veligers (young zebra mussels) are not present, the gate will be closed sometime in July. The Nebraska Game and Parks Commission agreed with this plan, but the City of Omaha continued to express concerns regarding safety issues, particularly if the lake is still down after school is out in the spring. The Corps has prepared a write-up describing the proposed procedures and timelines and

has asked the City and Game and Parks for a response. The City has not provided a letter at this time. Until a letter is provided by the City, the Corps will continue with the current plan and keep the pool elevation drawn down.

Papillion Creek Dam No. 20 – Wehrspann Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Pipestem Dam and Lake

Pipestem Reservoir is currently at a level of 1486.5 feet msl with 69.9% of the flood control storage occupied. The current releases are 200 cfs and yesterday's inflows were 337 cfs. The reservoir is forecasted to peak next week at a level of approximately 1486.6 feet msl, which is the third highest annual peak pool level on record. The peak daily inflow into Pipestem Reservoir was 4,200 cfs on April 11. See the Detailed Summary for additional information about long-term releases.

Salt Creek Dam No. 2 – Olive Creek Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 4 – Bluestem Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 8 – Wagon Train Dam and Lake

Project is releasing 11 cfs in fill and spill operations.

Salt Creek Dam No. 9 – Stagecoach Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 10 – Yankee Hill Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 12 – Conestoga Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 13 – Twin Lakes Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 14 – Pawnee Dam and Lake

Project is releasing 0 cfs in fill and spill operations.

Salt Creek Dam No. 17 – Antelope Creek Dam and Holmes Park Lake

Project is releasing 13 cfs in fill and spill operations.

Salt Creek Dam No. 18 – Branched Oak Dam and Lake

Project is releasing 18 cfs in fill and spill operations.

Spring Creek Dam and Lake Pocasse

Subimpoundment of Lake Oahe. Pool level is normally at or near elevation 1617 ft msl. A temporary gage was installed to help monitor the spring snowmelt. This gage was removed on May 7 and at that time the pool elevation was 1617.9 ft-msl. Currently the Oahe Project

Office is reading the Pocasse elevation monthly. Snowmelt inflow was observed in March and April resulted in a peak pool elevation near 1620 ft msl on April 7. No concerns are expected unless the pool gets to elevation 1625 ft msl.

Snake Creek Dam and Lake Audubon.

Subimpoundment of Lake Sakakawea (Garrison Dam). The USBR regulates the pool level with their pumping plant.

Bureau of Reclamation Projects

Tiber Dam and Lake Elwell.

The pool is currently at elevation 2985.08 ft msl. The snowpack above Tiber peaked at 142% of the 30 year average peak. . Releases are 2,570 cfs with an inflow of 3,099 cfs.

Canyon Ferry Reservoir.

The pool is currently near elevation 3778.4 ft msl and is being drawn down for the upcoming runoff season. Releases were increased to 14,000 cfs on May 20 in response to the recent rain events and local snow melts. Releases have been increased repeatedly to control the rate of rise in the reservoir. The USBR typically targets some elevation near the base of the joint use pool, elevation 3783 feet, msl, sometime prior to the spring runoff season.

Clark Canyon Reservoir.

The pool elevation is at 5544.9 ft msl and slowly rising. This is 1.2 feet below the base of the flood pool. Snowpack above Clark Canyon peaked at 140% of normal peak snowpack. The current inflow is estimated at approximately 378 cfs and the release is 352 cfs.

Yellowtail Dam.

The pool is currently near elevation 3606.55 ft msl. Normally, the USBR drafts the pool to 3620 ft msl, but it has been lowered nearly 17 feet since mid-April in anticipation of heavy runoff. Current models are showing the pool will be drawn down to 3604 ft msl before inflows begin to pick up. The base of the joint use pool is 3614 ft msl. The snowpack above Yellowtail peaked near 140% of normal peak snowpack. Releases have been increased to control the rate of rise in the pool and in response to the recent rain events. The current inflow is 7,096 cfs and the release is 7,924 cfs. USBR is planning to increase releases to 8,000 cfs in the next few days.

Glendo Reservoir.

The pool elevation is 4629.1 ft msl with 87% of the multipurpose pool occupied. The USBR typically stores winter and spring flows in an attempt to reach the base of the flood control pool (4635 ft msl) prior to the beginning of irrigation season in the summer. Over the past month, the North Platte River System has evacuated storage in preparation for high inflows due to an above normal snow pack in the Upper North Platte and Laramie River Basins. The USBR May 1 system inflow forecast for the period of April through July was increased by 355,000 AF when compared to the April 1 forecast for the same period. The May 1 forecast is to see over 2 million AF of inflow into the North Platte River Basin. Agency and stakeholder conference calls began on May 6 to coordinate the high releases along the North Platte River.

Jamestown Reservoir.

The current pool elevation is 1449.52 ft msl, 71% of the flood control pool occupied, and releases are 1,600 cfs. Inflows crested at 14,300 cfs on April 15 and are currently around 400 cfs. The reservoir peaked on May 1 at a level of 1451.3 feet above mean sea level (msl), which is the second highest annual peak pool level on record. Releases were reduced once in the past week because of rainfall in the Jamestown area, but are now back to normal levels of 1,600 cfs. See the Detailed Summary for additional information about long-term releases.

Boysen Reservoir.

The pool level is 4709.7 ft msl, 7.3 feet below the base of the joint use pool (4717 ft msl). Prior to the spring runoff season the USBR will generally lower the pool to some elevation below the base of the joint use pool to create extra room for runoff. This year the reservoir will be lowered to 4708 ft msl before the inflow pickup. Current inflows are 2,207 cfs and the release is 2,400 cfs.

Heart Butte Dam and Reservoir (Lake Tschida).

The pool level is 2064.1 ft msl, 0.3 feet below the top of the conservation pool. Inflows are 217 cfs and releases are 316 cfs in fill and spill operations.

Keyhole Dam and Reservoir.

The pool level is elevation 4093.7 ft msl, 5.6 feet below the base of the conservation pool. Inflows are 380 cfs and the release is 0 cfs.

Pactola Dam and Reservoir.

The pool is near elevation 4580.2 ft msl, slowly rising, with nearly 100% of the conservation pool occupied. Inflows are 220 cfs and releases are 120 cfs.

Shadehill Dam and Reservoir.

The pool elevation is 2271.7 ft msl which is 0.2 feet below the base of the flood pool, 2271.9 ft msl. Inflows are 307 cfs and releases are 132 cfs.

Missouri River Mainstem Projects

The current runoff forecast for the Missouri River mainstem is 44 million acre-feet (MAF), 178% of normal, which would be the second highest runoff season in 113 years of record keeping. The 49 MAF of runoff experienced in 1997 is the record high. In response to the unusually large amount of mountain snowpack above Fort Peck and Garrison, system releases from Gavins Point Dam were increased by 1,000 cfs on May 19 to 57,500 cfs. April's monthly average Gavins Point release was 30,300 cfs.

Fort Peck

Inflows to Fort Peck were 34,000 cfs on May 19. Releases are currently 20,000 cfs. Powerplant releases are 13,000 cfs and 7,000 cfs was released through the spillway. The midnight pool reading was elevation 2242.9 ft msl, 3.1 feet below the top of the annual flood control pool. The exclusive flood pool is from elevation 2246.0 to 2250.0 ft msl.

Garrison

Garrison inflows were 63,000 cfs and releases were 52,800 cfs on May 19. Garrison releases were increased from 52,000 cfs to 55,000 cfs on May 20. The current powerplant release is 31,000 cfs and 24,000 cfs is being released through the flood tunnels. Lake Sakakawea is currently at elevation 1849.6 ft msl, only 0.4 feet from the top of the annual flood control pool. The Garrison pool elevation will likely enter the exclusive flood control

within the next few days as the Yellowstone continues to have significant inflows into the reservoir. The exclusive pool is from 1850.0 to 1854.0 ft msl.

Oahe

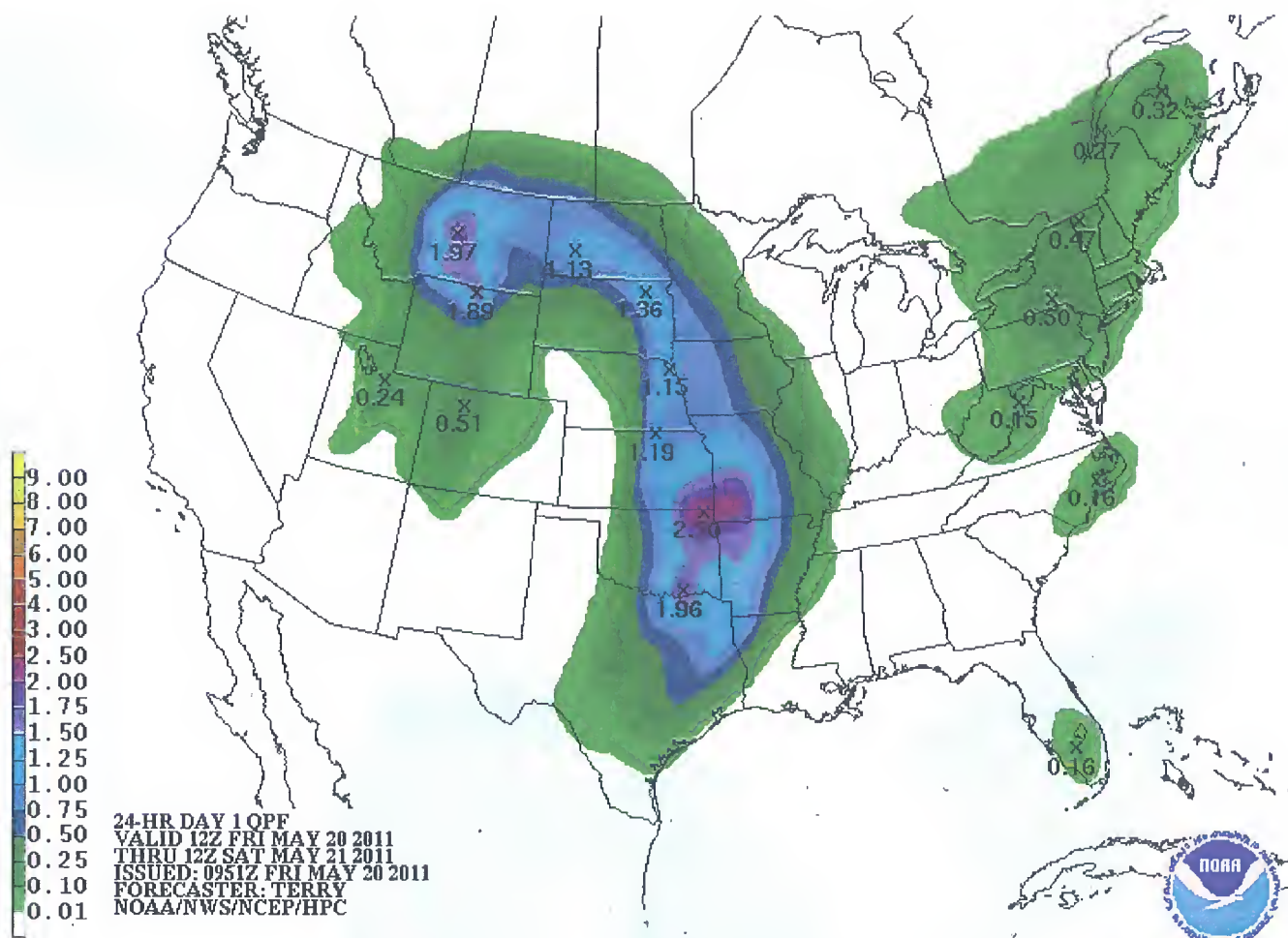
Outlet tunnel releases have varied from 18,000 to 26,500 cfs to allow the Western Area Power Administration to vary powerplant releases for load regulation. Lake Oahe has been just under elevation 1617.0 ft msl, the base of the exclusive flood control pool for several weeks. The top of the exclusive flood control pool is 1620.0 ft msl.

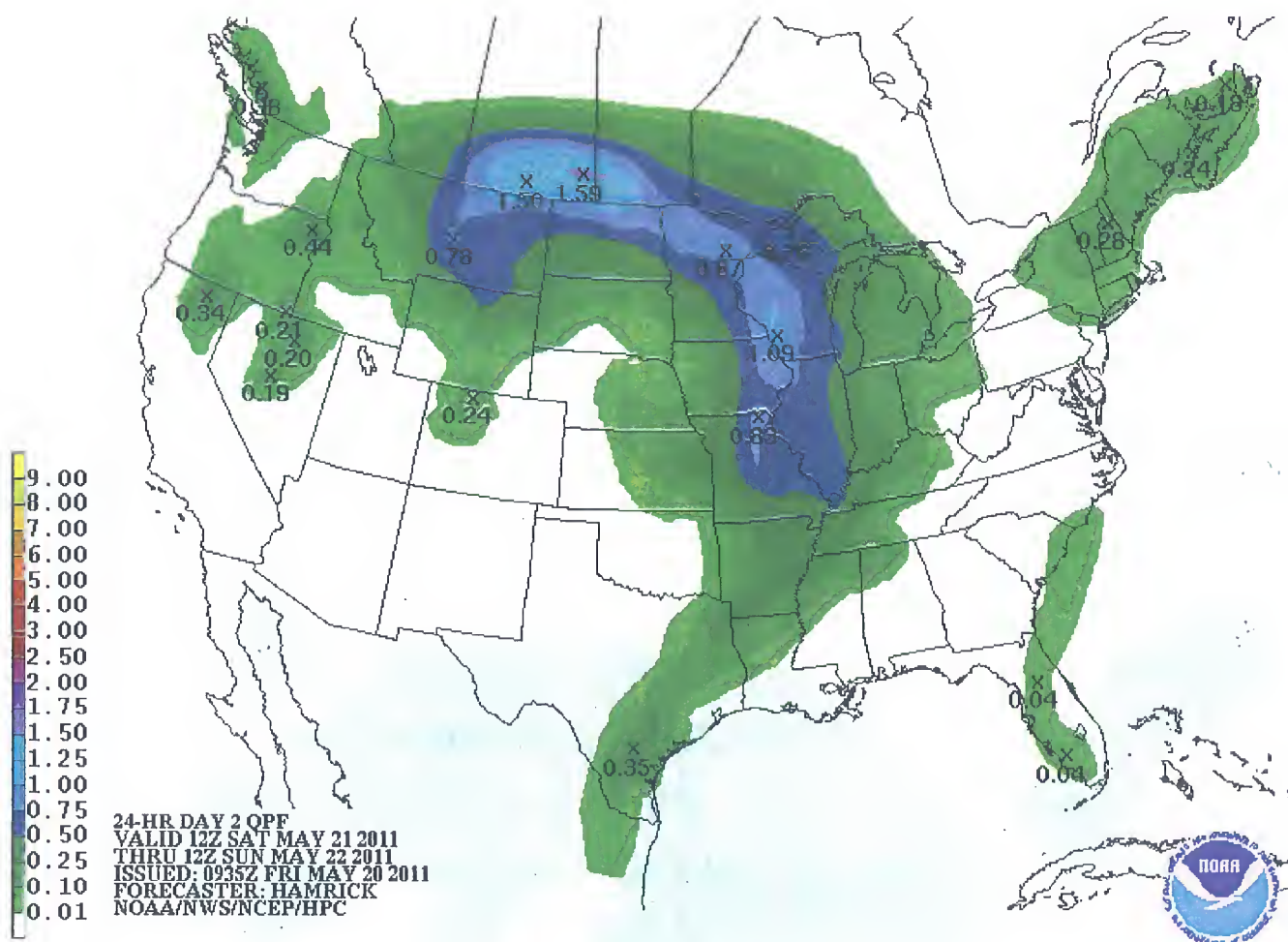
Fort Randall

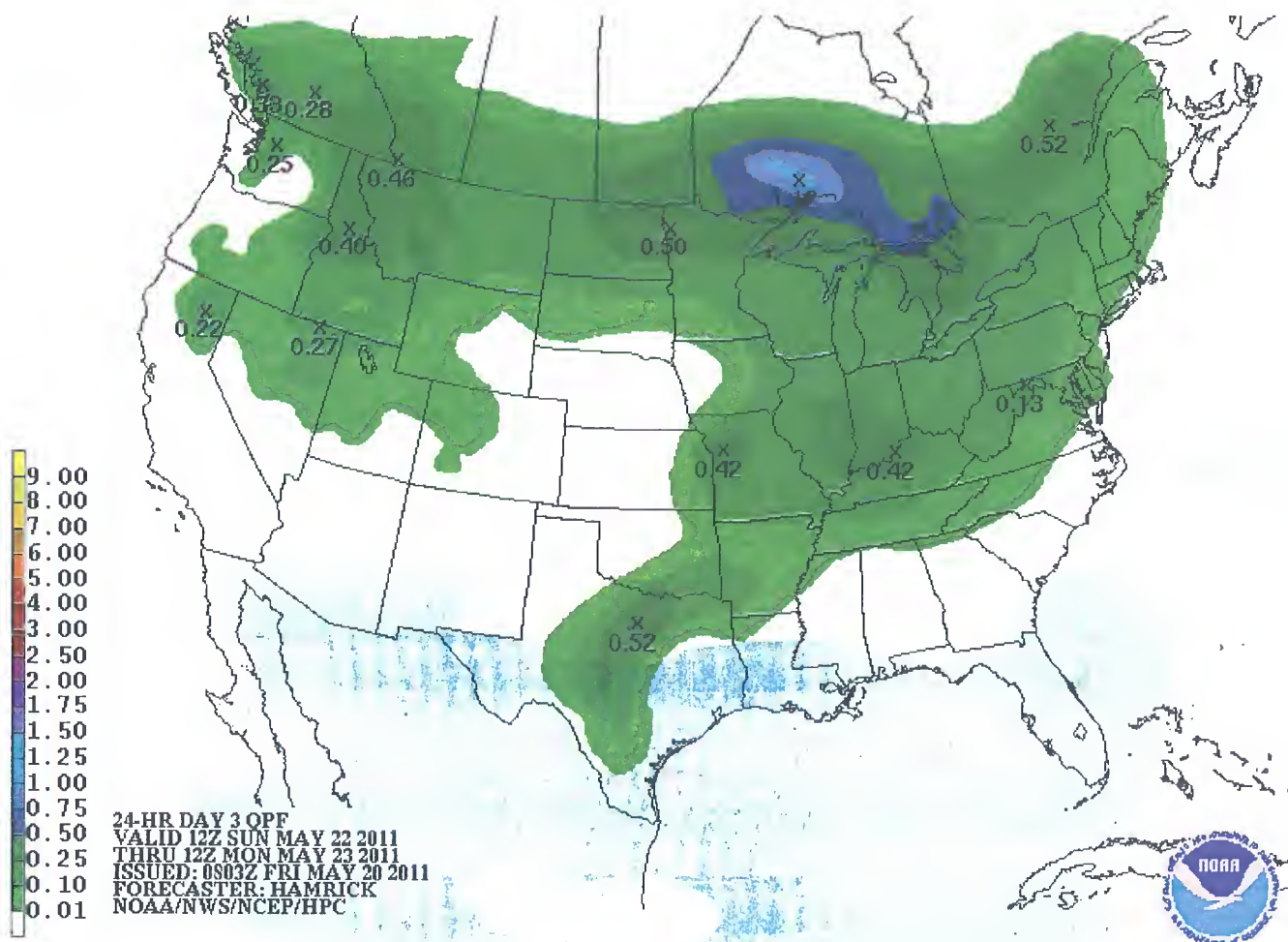
Lake Francis Case is near its normal spring and summer pool elevation at 1355.0 ft msl. Powerplant releases are 32,500 cfs and 26,500 cfs is being released over the spillway.

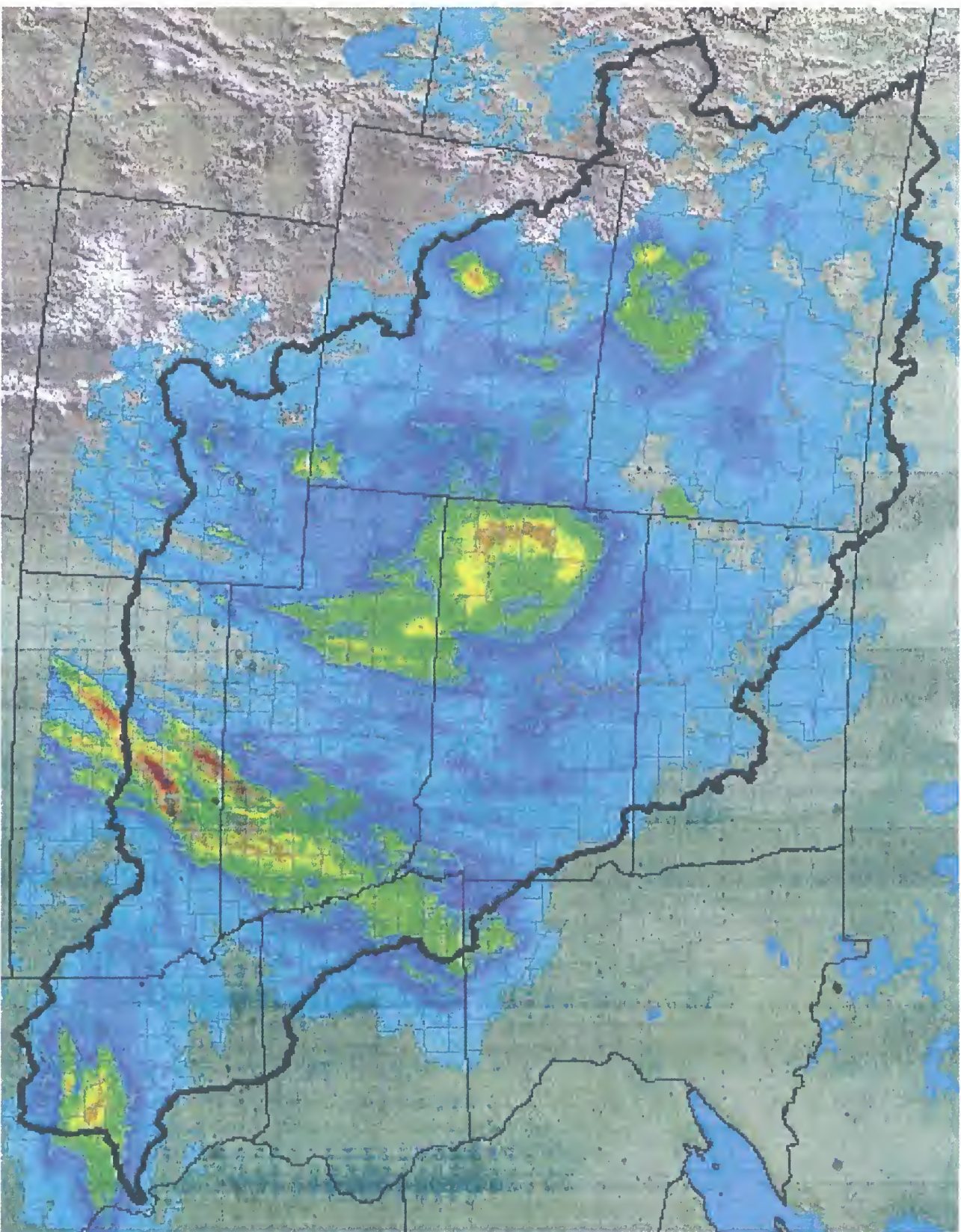
Gavins Point

Powerplant releases are 32,500 cfs and 25,000 cfs is being released over the spillway, for a combined total of 57,500 cfs. Increased releases will be required if the runoff forecast is increased above the current 44 MAF.









0.01 0.05 0.10 0.25 0.50 0.75 1.00 1.50 2.00 2.50 3.00 4.00 5.00 6.00 8.00 +

MBRFC 24-Hour Gage Biased, Estimated Rainfall (inches)

Ending: 5/20/2011 at 7:00AM CDT

Created 5/20/2011 at 7:17 AM CDT



US Army Corps
of Engineers
Omaha District

U.S. Army Corps of Engineers, Omaha District

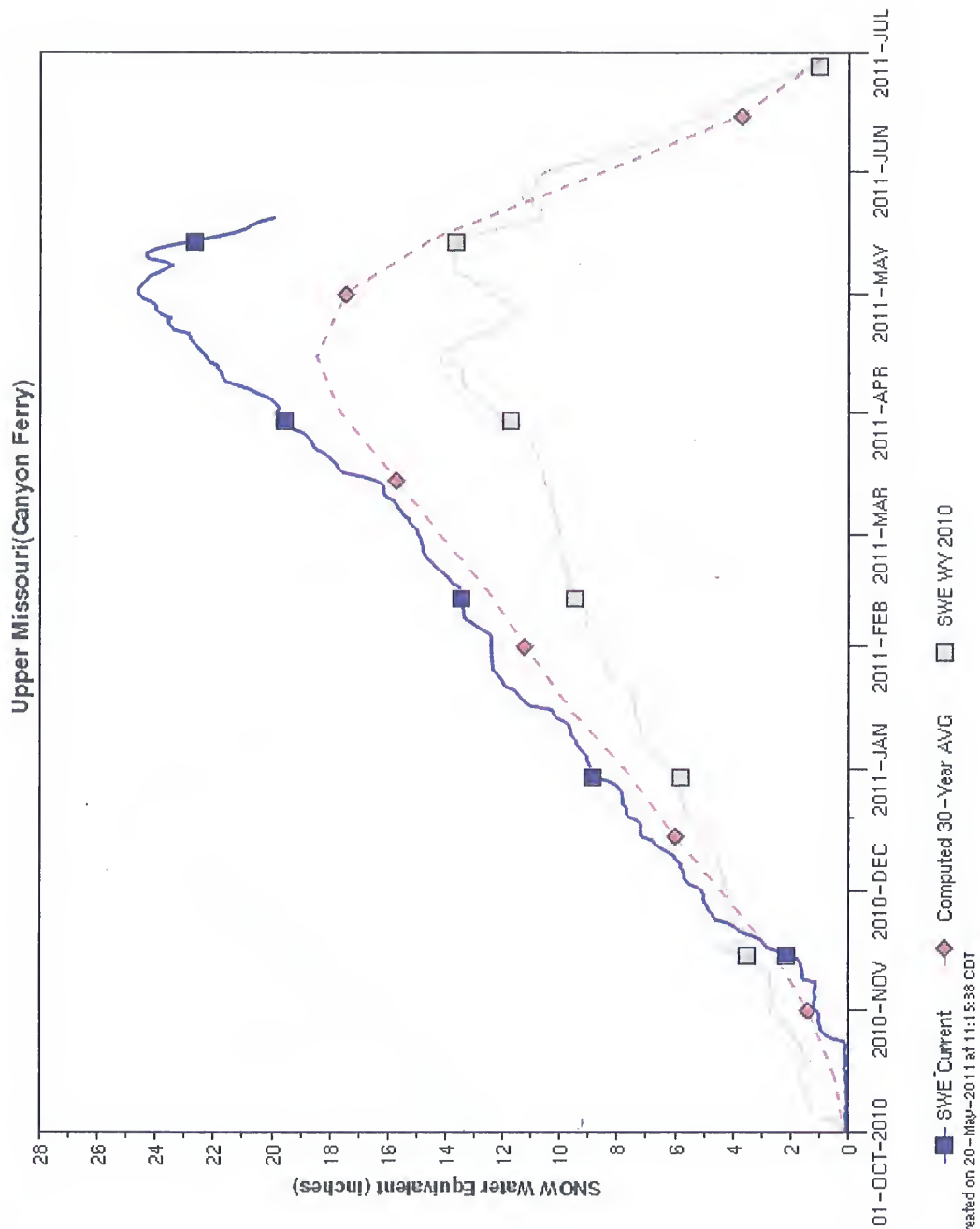
Missouri River Basin

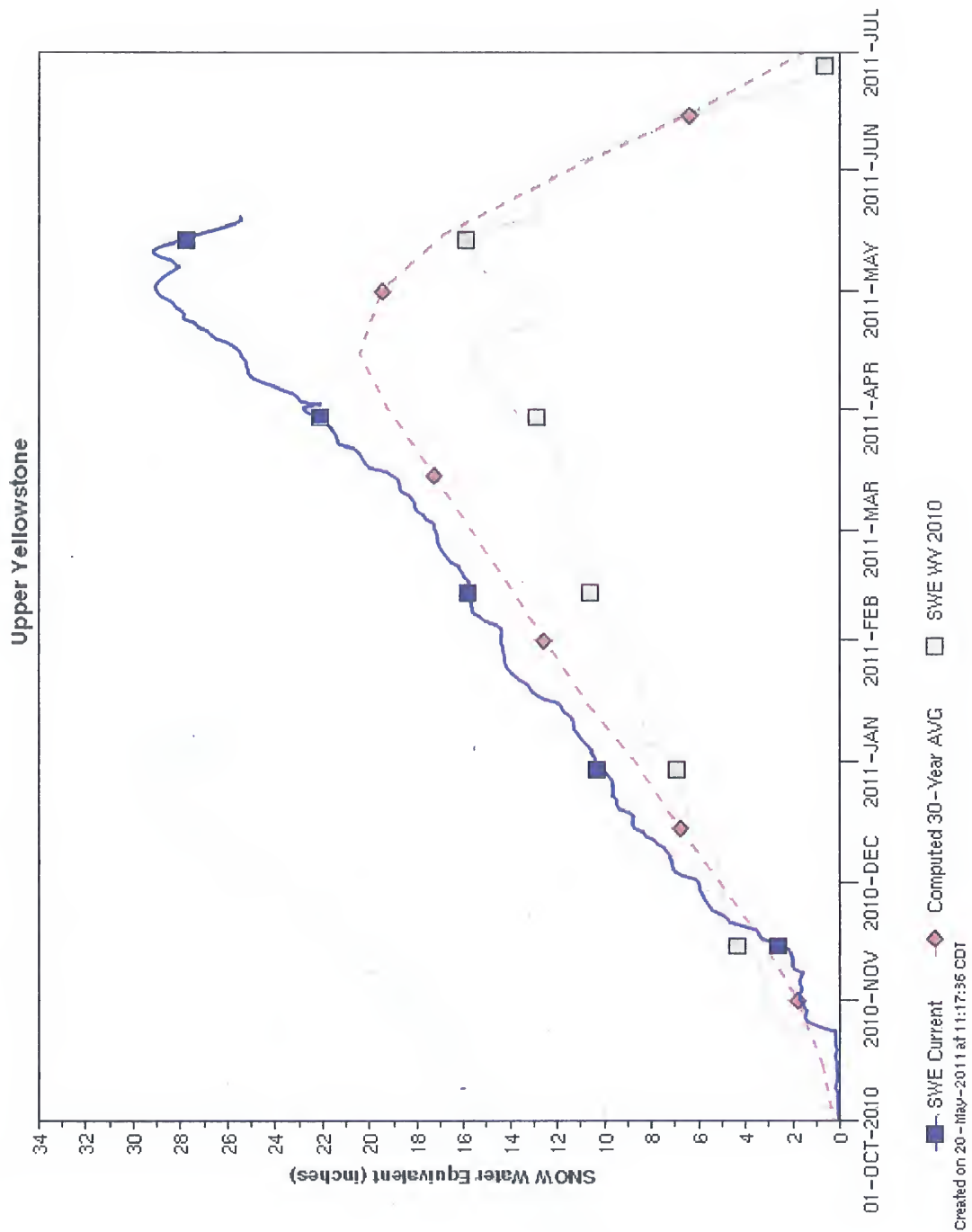
Mainstem and Tributary Reservoir Bulletin

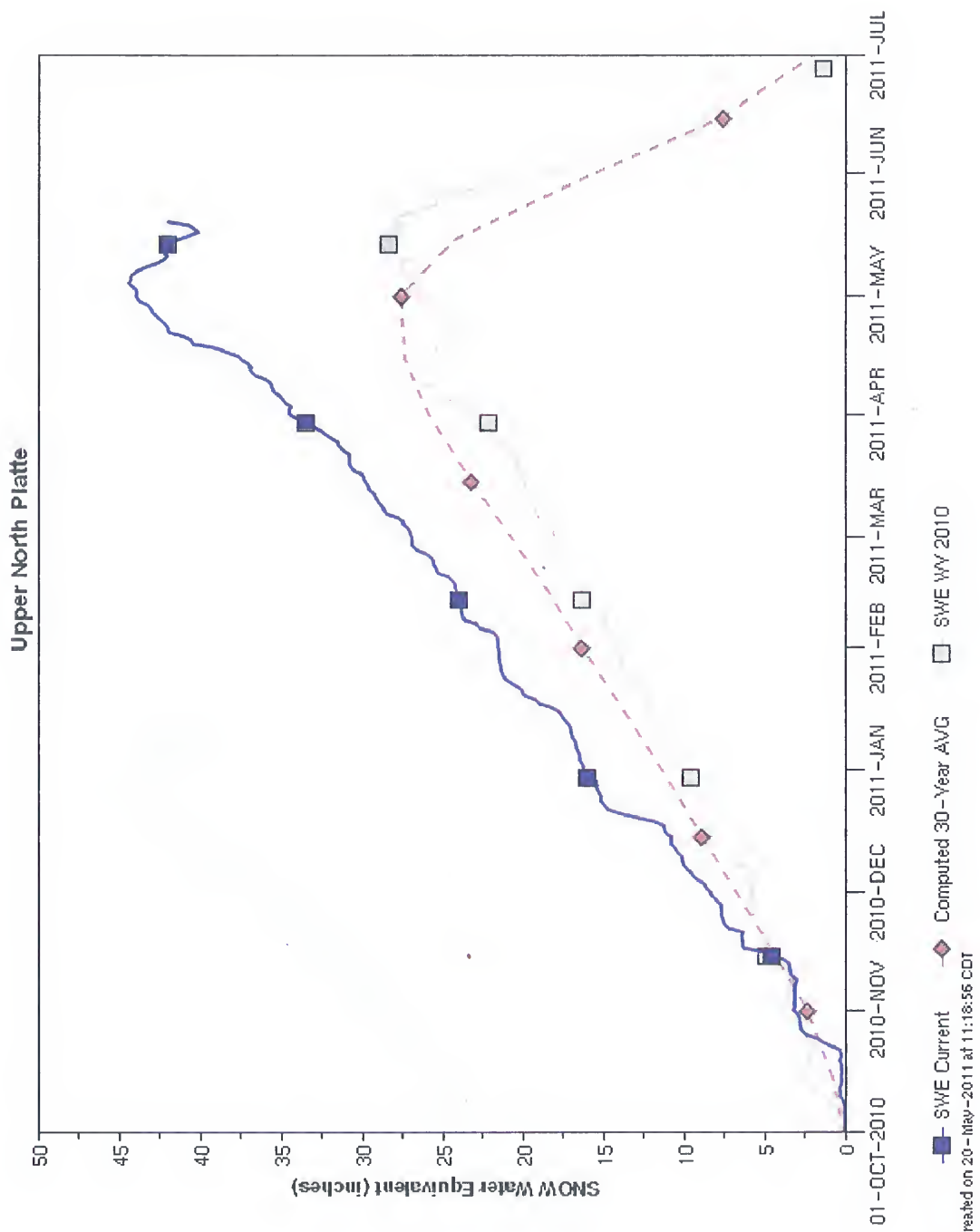
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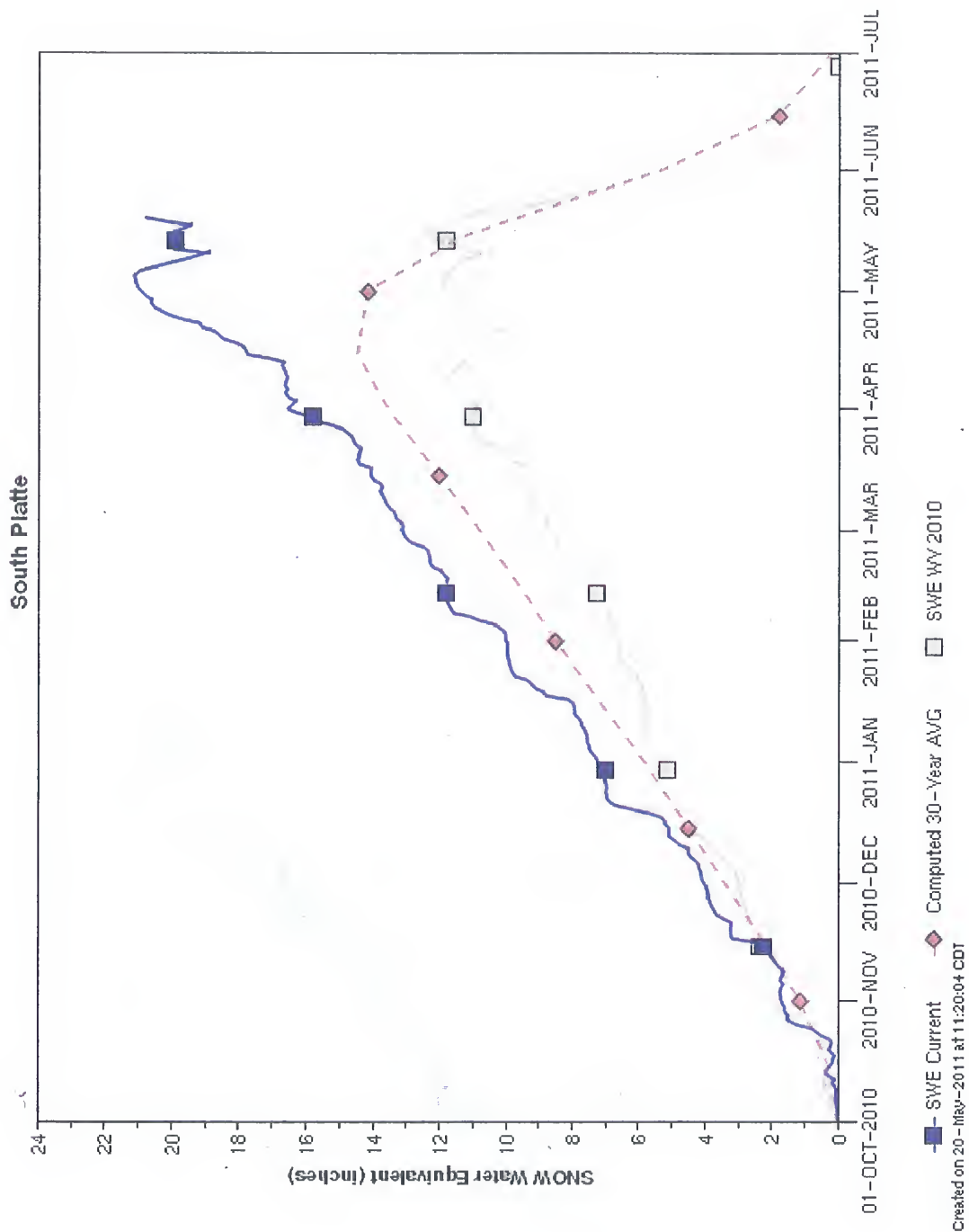
Bulletin Updated: 5/20/11 9:50 AM

Project	Project Information				Current Data					Occupied Storage		
	Elevations (ft msl)		Storage		Elevation (ft msl)	Dly Elev. Change	Storage (ac-ft)	Inflow (dsf)	Release (dsf)	MP (%)	FC (ac-ft)	FC (%)
	MP	FC	MP	FC								
MRR - Missouri River Mainstem Projects												
*Please note Mainstem and USBR data is calculated manually and will populate before 12:00 p.m.												
Fort Peck	2234.0	2250.0	14,995,684	18,687,731	2242.90	0.13	16,757,000	34,000	19,700	100.0	1,761,316	47.7
Garrison	1837.5	1854.0	18,109,625	23,820,730	1849.58	0.01	22,164,000	63,000	52,800	100.0	4,054,375	71.0
Oahe	1607.5	1620.0	18,834,035	23,136,960	1616.95	0.08	22,008,000	61,000	52,500	100.0	3,173,965	73.8
Big Bend	1420.0	1423.0	1,621,484	1,798,614	1420.02	0.13	1,621,000	49,000	45,400	100.0	0	0.0
Fort Randall	1350.0	1375.0	3,124,368	5,418,186	1354.95	-0.21	3,528,000	52,000	56,900	100.0	403,632	17.6
Gavins Point	1204.5	1210.0	320,971	469,928	1205.76	-0.03	337,000	57,000	57,000	100.0	16,029	10.8
System Totals							66,415,000					
NWO - USBR Section 7 Projects												
Tiber	2993.0	3012.5	925,649	1,328,723	2985.08	0.05	792,700	3,099	2,570	85.6	0	0.0
Clark Canyon	5546.1	5560.4	174,367	253,442	5544.89	0.01	168,107	378	352	96.4	0	0.0
Canyon Ferry	3797.0	3800.0	1,891,888	1,992,977	3778.40	-0.02	1,314,051	13,679	13,958	69.5	0	0.0
Boysen	4725.0	4732.2	741,594	892,226	4709.72	-0.03	488,649	2,207	2,417	65.9	0	0.0
Buffalo Bill	5393.5	5393.5	646,565	646,565	5347.34	-0.25	321,567	2,778	3,512	49.7		
Yellowtail	3640.0	3657.0	1,070,000	1,328,000	3606.55	-0.30	744,580	7,096	7,924	69.6	0	0.0
Jamestown	1429.8	1454.0	31,510	221,000	1449.52	-0.21	165,557	368	1,589	100.0	134,047	70.7
Heart Butte	2064.4	2094.5	67,000	214,000	2064.12	-0.06	65,869	217	316	98.3	0	0.0
Keyhole	4099.3	4111.5	194,000	334,000	4093.74	0.10	141,462	380	0	72.9	0	0.0
Pactola	4580.2	4621.5	56,000	99,000	4580.19	0.23	55,945	220	120	99.9	0	0.0
Shadehill	2271.9	2302.0	120,000	350,000	2271.70	0.07	118,626	307	132	98.9	0	0.0
Glendo	4635.0	4653.0	518,000	790,000	4629.10	0.31	449,177	7,510	5,825	86.7	0	0.0
NWO - USACE Tributary Projects												
Bowman-Haley	2754.8	2777.0	18,765	91,482	2755.05	0.00	19,187	-16	23	100.0	422	0.6
Pipestem	1442.5	1496.3	8,944	142,107	1486.52	0.12	102,007	295	204	100.0	93,063	69.9
Chatfield	5432.0	5500.0	27,428	234,207	5431.69	0.19	26,973	94	0	98.3	0	0.0
Cherry Creek	5550.0	5598.0	12,805	133,134	5550.20	0.17	12,967	65	16	100.0	162	0.1
Bear Creek	5558.0	5635.5	1,882	30,586	5558.68	0.13	1,954	61	58	100.0	72	0.3
Papio #11	1121.0	1142.0	3,054	16,907	1121.38	0.02	3,203	6	2	100.0	149	1.1
Papio #16	1104.0	1121.0	1,211	4,782	1104.38	0.00	1,260	5	5	100.0	49	1.4
Papio #18	1110.0	1128.2	2,916	10,512	1092.50	0.00	281	6	6	9.6	0	0.0
Papio #20	1095.8	1113.1	2,536	8,611	1096.16	0.00	2,610	-4	0	100.0	74	1.2
Cottonwood	3875.0	3936.0	655	8,385	3856.52	0.00	0	0	0	0.0	0	0.0
Cold Brook	3585.0	3651.4	520	7,200	3582.36	0.27	427	2	0	82.2	0	0.0
Lake Audubon	1847.0	1847.0	323,690	323,690	1846.81	0	INFLOW AND OUTFLOW NOT CALCULATED					
Lake Pocasse	1617.0	1617.0	11,000	11,000	POOL ELEVATION READ MONTHLY BY PROJECT OFFICE							
Salt Creek #02	1335.0	1350.0	1,100	4,957	1332.72	0.08	763	6	0	69.3	0	0.0
Salt Creek #04	1307.4	1322.5	2,531	9,660	1305.76	0.08	2,051	11	0	81.0	0	0.0
Salt Creek #08	1287.8	1302.0	1,780	8,375	1287.94	0.00	1,733	11	11	97.4	0	0.0
Salt Creek #09	1271.1	1285.0	1,451	5,864	1271.20	0.04	1,470	4	0	100.0	19	0.4
Salt Creek #10	1244.9	1262.0	1,629	7,468	1244.73	0.11	1,594	12	0	97.9	0	0.0
Salt Creek #12	1232.9	1252.0	1,808	9,415	1233.21	0.21	1,875	24	0	100.0	67	0.9
Salt Creek #13	1341.0	1355.0	2,161	7,182	1341.34	0.43	2,243	53	0	100.0	82	1.6
Salt Creek #14	1244.3	1263.5	7,500	27,597	1244.70	0.29	7,790	107	0	100.0	290	1.4
Salt Creek #17	1242.4	1266.0	783	6,628	1242.64	0.21	837	13	0	100.0	54	0.9
Salt Creek #18	1284.0	1311.0	25,088	96,759	1284.68	0.37	26,356	369	18	100.0	1,268	1.8

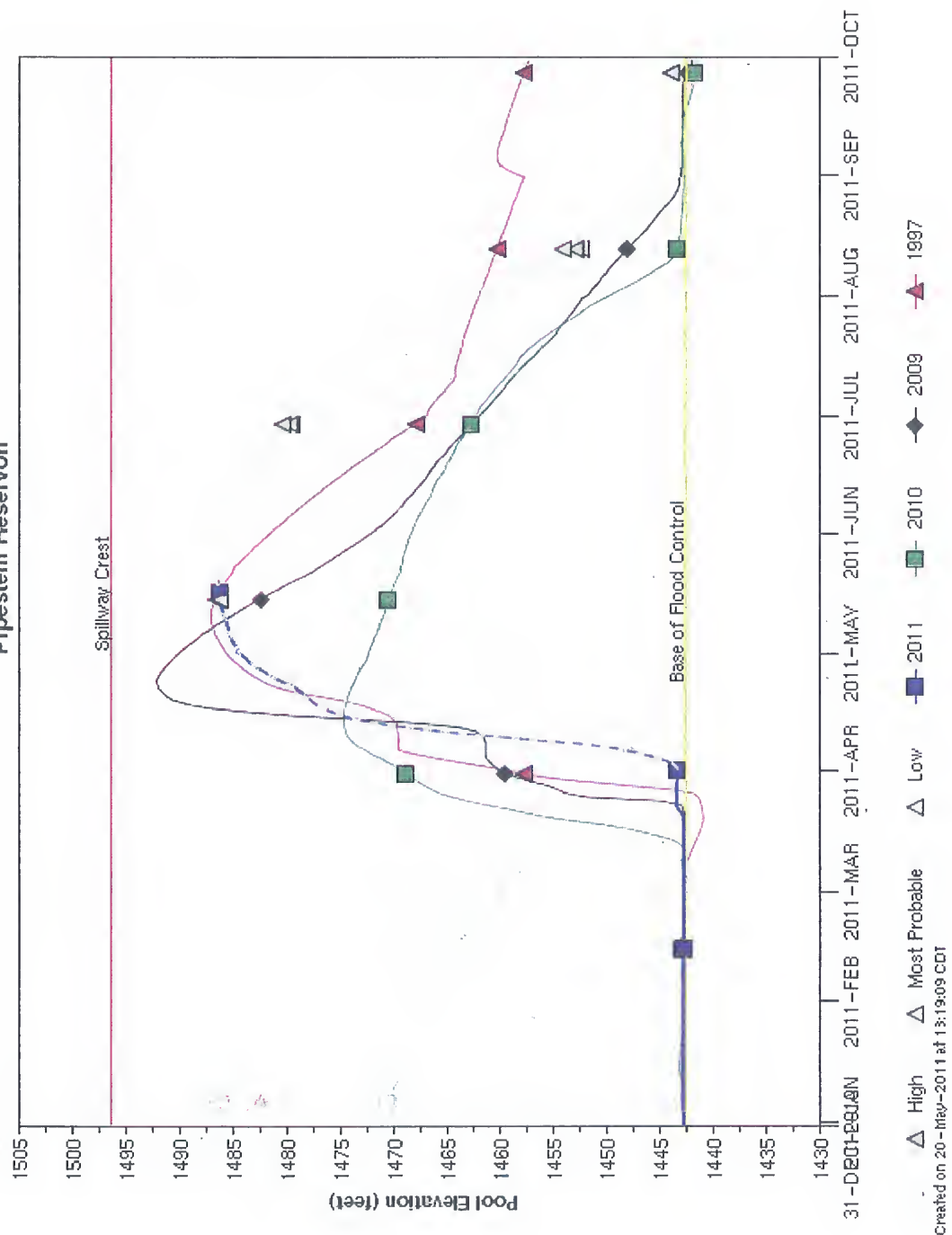




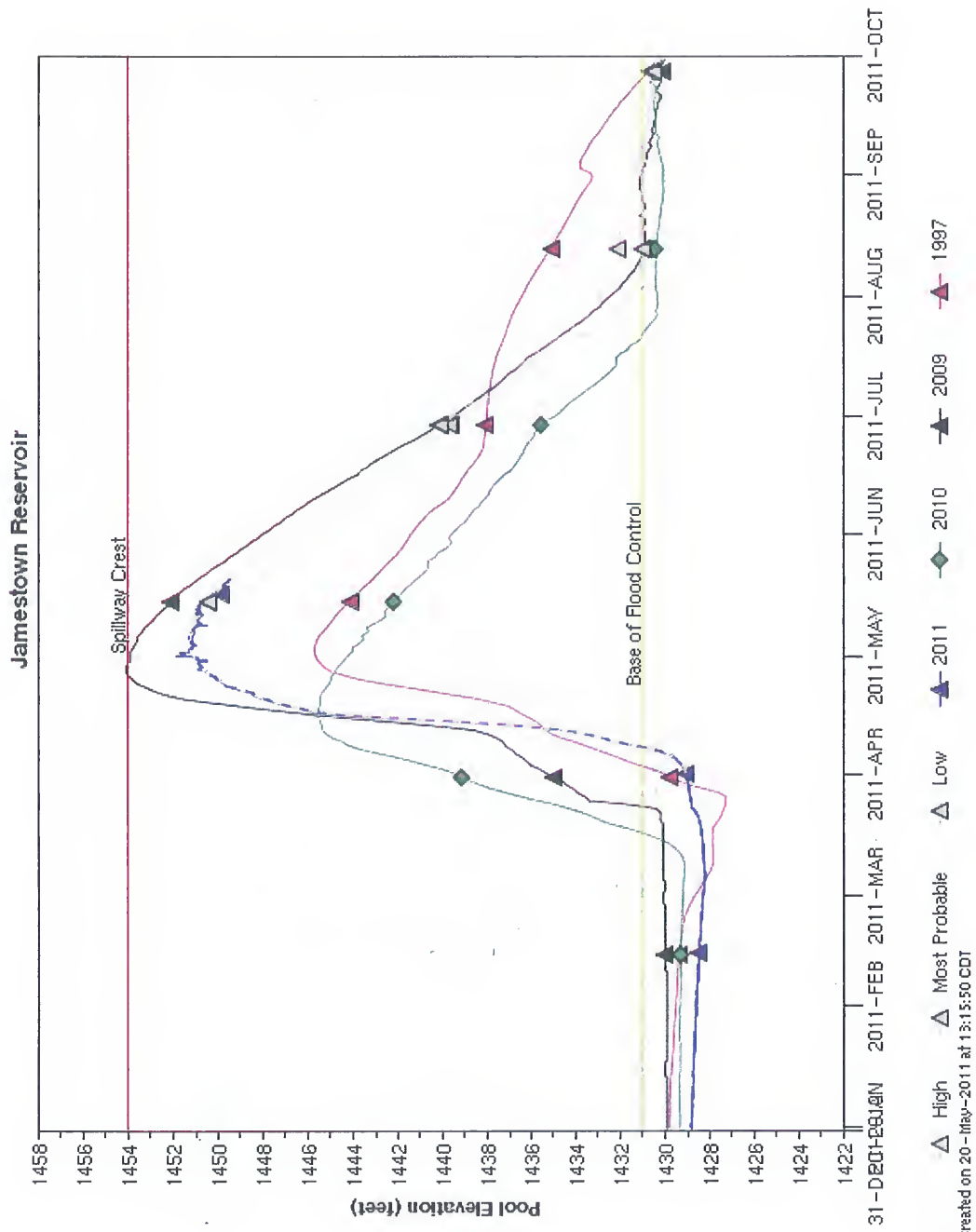




Pipestem Reservoir



Created on 20-May-2011 at 13:19:09 CDT



[REDACTED]
From: [REDACTED]
Sent: [REDACTED]
To: [REDACTED]
Subject: Fw: Knife River

[REDACTED] - what do you think about holding off on the garr increase tomorrow?

----- Original Message -----

From: [REDACTED]
To: Farhat, Jody S NWD02
Sent: Sat May 21 12:14:12 2011
Subject: Knife River

Jody,

There seems to be a lot of water running in ditches and drainages. I checked the NWS gage for the Knife River at Hazen and they are forecasting a stage of 24 feet by Monday, which equates to about 10,000 cfs. I'm not sure what your folks are seeing but I'm wondering about tomorrow's 2,000 cfs increase from Garrison...

Message sent via my BlackBerry Wireless Device

[REDACTED]

From: Farhat, Jody S NWD02
Sent: Saturday, May 21, 2011 7:35 PM
To: [REDACTED]
Subject: Re: Knife River

Sure.

----- Original Message -----

From: [REDACTED]
To: Farhat, Jody S NWD02
Sent: Sat May 21 16:55:59 2011
Subject: Re: Knife River

That seems like a good idea for now. Do you want me to give them a call?

[REDACTED]

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: Farhat, Jody S NWD02
To: [REDACTED]
Sent: Sat May 21 16:19:29 2011
Subject: Fw: Knife River

[REDACTED] what do you think about holding off on the garr increase tomorrow?

----- Original Message -----

From: [REDACTED]
To: Farhat, Jody S NWD02
Sent: Sat May 21 12:14:12 2011
Subject: Knife River

[REDACTED]

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[REDACTED]

Message sent via my BlackBerry Wireless Device

[REDACTED]

From: Farhat, Jody S NWD02
Sent: Saturday, May 21, 2011 7:38 PM
To: [REDACTED]
Subject: Re: Knife River

[REDACTED] is going to call the operator and cancel the increased planned for tomorrow morning.

Jody

----- Original Message -----

From: [REDACTED]
To: Farhat, Jody S NWD02
Sent: Sat May 21 12:14:12 2011
Subject: Knife River

[REDACTED]

There seems to be a lot of water running in ditches and drainages. I checked the NWS gage for the Knife River at Hazen and they are forecasting a stage of 24 feet by Monday, which equates to about 10,000 cfs. I'm not sure what your folks are seeing but I'm wondering about tomorrow's 2,000 cfs increase from Garrison...

Todd

Message sent via my BlackBerry Wireless Device

[REDACTED]
[REDACTED]
From: Farhat, Jody S NWD02
Sent: Monday, May 23, 2011 9:04 AM
To: [REDACTED]
Subject: RE: Knife River (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Bismarck is 14.2 this morning; it was 13.4 Friday morning.

-----Original Message-----

From: [REDACTED]
Sent: Monday, May 23, 2011 8:50 AM
To: Farhat, Jody S NWD02; [REDACTED]
Subject: RE: Knife River (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

The Knife peaked at just over 17 feet (about 5,000 cfs), half of what they were predicting earlier, but the stage at Bismarck continued to rise. I spoke with a homeowner north of the Heskitt Power Plant this morning. He said that he saw a foot rise over the weekend. I can't get to the river stage website this morning but I didn't think it came up quite that high?

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Saturday, May 21, 2011 7:38 PM
To: [REDACTED]
Subject: Re: Knife River

[REDACTED] is going to call the operator and cancel the increased planned for tomorrow morning.

Jody

----- Original Message -----

From: [REDACTED]
To: Farhat, Jody S NWD02
Sent: Sat May 21 12:14:12 2011
Subject: Knife River

Jody,

There seems to be a lot of water running in ditches and drainages. I checked the NWS gage for the Knife River at Hazen and they are forecasting a stage of 24 feet by Monday, which equates to about 10,000 cfs. I'm not sure what your folks are seeing but I'm wondering about tomorrow's 2,000 cfs increase from Garrison...

Message sent via my BlackBerry Wireless Device

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] E NWO
Sent: Saturday, May 21, 2011 9:48 PM
To: Thomas, Kimberly S NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] J NWO; Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] M NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: Re: Flood Update #66 (UNCLASSIFIED)

From [REDACTED] with Bureau of Reclamation in Billings, there is a secondary road bridge near Hardin, MT that is in danger of collapsing because of high flows downstream of Yellowtail Dam. This area received heavy rainfall and DOT fears that if bridge collapses it may take out Interstate-90 bridges. NWS shows this area has received 8 inches of rain in last 48 hours. Yellowtail releases have been reduced to 3500 cfs.

Thanks, [REDACTED]

From: Thomas, Kimberly S NWO
To: DLL-CENWO-EOC CMT-ALL
Cc: CENWD-EOC NWD; [REDACTED], Kayla A NWO; [REDACTED] L HQ02; [REDACTED] NWK
Sent: Sat May 21 15:26:03 2011
Subject: Flood Update #66 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: FOUO

****EMERGENCY OPERATIONS****

1. Situation:

Heavy rain continues over the District especially in MT at this time.

COL Ruch and staff will meet with State EM personnel from both NE and WY on 23 May 2011 including the NE Lieutenant Governor in North Platte, NE and Cheyenne, WY. The team will discuss the current situation and forecast.

Alabama Tornadoes: [REDACTED] is currently deployed to support the debris SME and [REDACTED] is deployed to provide PAO support to MVS.

2. Weather:

2a. Past Precipitation:

Widespread precipitation fell throughout the District for the 24 hours ending 7:00 am 21 May 2011 especially in the northern and eastern part of the district. Central Montana received between 2.5 and 3 inches with some local rainfall as high as 4 inches. Western North Dakota received between 1.5 and 2.5 inches west of the Missouri River. Central South Dakota received over 1 inch of rain.

2b. Future Precipitation:

The day 1 QPF (700 hours Saturday to 700 hours Sunday): A large band of up to 2 inches of rain is forecasted for eastern Montana. Northern North Dakota could receive up to 1 inch of rain.

The day 2 QPF (700 hours Sunday to 700 hours Monday): Western Montana is forecasted to receive up to 0.5 inches of rain/snow depending on the elevation. The Dakotas could get less than 0.25 inches.

The day 3 QPF (from 700 hours Monday to 700 hours Tuesday): The western side of the district is forecasted to receive precipitation with near 0.5 inches in western Montana and 0.9 inches in north-east Colorado.

2c. Temperatures:

Attached is a spreadsheet with the high and low temperatures for the next 7 days at Billings, MT; Cody WY; Sheridan WY; Saratoga, WY; and Casper, WY. High temperatures are in the 50s today at these locations, warming to the 60s by Sunday, then 50s by Tuesday. Lows are in the mid 30s at Saratoga, WY and generally low 40s at the other stations.

3. Hydro Status:

3a. River/Current Stage/Forecast Stage/Date of Peak:

Montana

- Little Bighorn River near Hardin/6.5/9.9/May21
- Tongue River at Miles City/14.0/14.3/May21
- Yellowstone River at Miles City/10.9/15/May 24
- Yellowstone River at Glendive/52.4/55.2/May 24
- Yellowstone River near Sidney/12.8/20.4/May 24

North Dakota

- James River at Jamestown/11.2'(1,680 cfs)/steady//
- James River at LaMoure/11.5'/steady

South Dakota

- Cheyenne River near Plainview/17.3/17.3/cresting
- White River near White River/11.6/15/cresting-river is not following forecast

Nebraska

- North Platte River at North Platte/7.06/7.3/May 24//
- North Platte River at State Line/5.74/steady
- Missouri River at NE City/20.5/21.9/May22

- Missouri River at Brownville/35.44/38.6/May 22

- Missouri River at Rulo/18.5/21.9/May 23

3.b Reservoirs:

Pipestem Reservoir, ND rose 0.06' yesterday to elevation 1486.58 ft-msl. Yesterday's daily inflows were 314 cfs and the release was 200 cfs. 70% of the flood pool is occupied.

Jamestown Reservoir, ND fell 0.13' yesterday to elevation 1449.39 ft-msl. Yesterday's daily inflows were 909 cfs. Releases were 1600 cfs for most of the day, but were cut back to 1400 cfs in the evening in anticipation of heavy rainfall in the area. Releases reaming at 1400 cfs because of the rain in the area, but will be increased as soon on the precipitation passes. 69.9% of the flood pool is occupied. The combined release from both dams is 1,600 cfs.

Fort Peck Dam, MT

Pool Elevation: 2243.02 ft-msl

24 hr change: 0.12'

Inflow: 37,000 cfs

Release: 20,000 cfs

Garrison Dam, ND

Pool Elevation: 1849.59 ft-msl

24 hr change: 0.01'

Inflow: 73,000 cfs

Release: 54,000 cfs

Oahe Dam, SD

Pool Elevation: 1617.14 ft-msl

24 hr change: 0.19'

Inflow: 74,000 cfs

Release: 57,000 cfs

Big Bend Dam, SD

Pool Elevation: 1420.17 ft-msl

24 hr change: 0.15

Inflow: 48,000 cfs

Release: 58,000 cfs

Fort Randall Dam, SD

Pool Elevation: 1354.94 ft-msl

24 hr change: -0.01'

Inflow: 57,000 cfs

Release: 57,500 cfs

Gavin's Point Dam, SD

Pool Elevation: 1205.94 ft-msl

24 hr change: 0.18

Inflow: 57,600 cfs

Release: 57,500 cfs

4.a Emergency Operations:

4.a.1 Nebraska:

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro), are providing technical assistance to the communities of Bridgeport, Lewellen, and North Platte along the North Platte River Basin. The team met with County EM and Sherriff for Lewellen yesterday afternoon. Currently, the community has a road (RD 199A) that goes over the North Platte River. Due to siltation under the bridge and upstream of the bridge, water height differential is about 2-3 feet compacted to the downstream side of the bridge. This is creating backwater that has already crossed over RD 199A. The community met last night to discuss breaching this road to allow more water to travel downstream to Lake McConaughy. The team is now in North Platte and met with officials this morning. This meeting included Jim Hawks (City Admin), Tom Werblow (City Engr), and the Lake McConaughy Engineer. NWO personnel Don Moses and Steve Butler also participated via teleconference. Currently, Lake McConaughy is releasing 3650 cfs with 1750 cfs of that being diverted down the diversion channel prior to North Platte. At midnight tonight, releases will be increased to 4350 cfs with 1750 cfs going down the diversion. Another increase is scheduled for Tuesday. The engineer from Lake McConaughy stated that the reservoir will be considered full at EL 3267. The team is currently touring the community with city officials determining problem areas.

A third flood fight team([REDACTED]) is departing for North Platte on 22 May 2011. The team is working with the city to prepare for the large releases from Kinsley Dam and the North Platte River System. Current probably forecasted releases are 5500 cfs. The City is currently at max channel capacity at 4000 cfs. The City has 75% channel capacity reduction. The FEMA DFIRM 100 year map was mapped for a flow of 12,000 cfs, USACE currently believes that the flooding extent of the 100 year is equivalent to approximately 4380 cfs with the reduced channel capacity. At the 5500 cfs, several areas of critical infrastructure are inundated.

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro) deployed yesterday to provide assistance in communities upstream of Lewellen, which includes Henry, Morill, Mitchell, Scottsbluff, Terrytown, Gering, Minatare, McGrew, and Lisco. On Friday afternoon, they met with city officials from Scottsbluff and Gering. Today, they will finish up in the Scottsbluff area with a meeting with Terrytown officials. Flows currently in the Scottsbluff, Gering, and Terrytown area is what they saw in 2010. Rising water will threaten

lift stations, water well fields, and waste water treatment facilities. The team will collect elevation data and compare it to forecasted flows to determine if any protective measures need to be placed. They will also be meeting with city officials from Henry today.

4.a.2 Montana - No Change

4.a.3 North Dakota - No Change

4.a.4 South Dakota:

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro) have returned to the District Office after providing technical assistance to the City of Bristol. The city is asking for help in determining what could be done, what needs to be done or steps the city should strive for to decrease or eliminate the possible flooding problems from three sloughs that are now lake size bodies that drain through the storm sewer system in town. A trip report, including recommendations, will be completed this weekend.

4.b Funding:

* Total Code 200 Funding received to date for this event: \$1,762,425

* Total Code 200 Funding revoked to date for this event: \$2,600,000

* Class 219 - Emergency Operations - Direct Assistance - \$250,000 - WAD and FAD received 3/14/2011

* Class 219 - Emergency Operations - Direct Assistance - \$3.825M - WAD received 03/15/11. FAD received 03/16/11.

* Class 219 - Additional Funds Request on 24 March - \$231,425 - WAD and FAD received 03/24/11.

* Class 219 - Emergency Operations - Direct Assistance - \$2.5M revoked - 4/13/11

* Class 219 - Emergency Operations - Direct Assistance - \$100k revoked - 4/22/11

* Class 210 - Response Operations - Alabama Tornadoes - \$56k - MIPR - 4/30/11

* Class 210 - Response Operations - Alabama Tornadoes - \$25k - Request and received for EOC Operations and deployments on 4/30/11

4.c Number of Personnel Supporting EOC Operations: 15

4.d EOC Activation - Level III - Partial Activation(Hours: 0700 to 1700)

ADVANCE MEASURES

1. Situation:

Currently monitoring high snow water equivalents in WY and MT.

2. Advance Measures:

2.a.2 WYOMING - No Change.

2.b Funding:

- * Total Code 500 Funding received to date: \$787,904
- * Class 520 Funding - Advance Measures - Technical assistance - \$100K. WAD and FAD received on 3/2/11.
- * Class 52A Additional Request for Funding - Advance Measures - Technical assistance - \$100K. WAD and FAD received on 3/10/11.
- * Class 520 Additional Request for Funding - Advance Measures - Technical assistance - \$101,640. WAD and FAD received on 3/24/11.
- * Class 519 Funding - Advance Measures - Direct Assistance - \$376,264. WAD and FAD received on 3/28/11.
- * Class 520 Funding - Advance Measures - Technical assistance - \$110k - FAD received on 05/12/11.

2.c Number of Personnel Supporting Advance Measures EOC Operations: 10

3.c EOC Activation - Level III - Partial Activation(Hours: 0700 to 1700)

<<CMDMessagesTalkingPointsFlooding2011rev052011.doc>> <<dailybull 5_21_11.pdf>>
<<TempOutlook_21May11.xlsx>> <<3dayQPF 5_21_11.gif>> <<2dayQPF 5_21_11.gif>> <<1dayQPF
5_21_11.gif>> <<24hr Past Precip 5_21_11.jpg>>

[REDACTED]
Chief, Readiness Branch

U.S. Army Corps of Engineers - Omaha District

1616 Capitol Ave., Ste 9000

Omaha, NE 68102

[REDACTED] Office

[REDACTED] Blackberry

[REDACTED]@usace.army.mil

Classification: UNCLASSIFIED

Caveats: FOUO

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Saturday, May 21, 2011 7:47 PM
To: Farhat, Jody S NWD02
Subject: Re: Knife River

Done - I talked to the garrison operator.

Message sent via my BlackBerry Wireless Device

----- Original Message -----
From: Farhat, Jody S NWD02
To: Swenson, Michael A NWD02
Sent: Sat May 21 17:35:29 2011
Subject: Re: Knife River

Sure.

----- Original Message -----
From: [REDACTED] NWD02
To: Farhat, Jody S NWD02
Sent: Sat May 21 16:55:59 2011
Subject: Re: Knife River

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Todd

Message sent via my BlackBerry Wireless Device

NWO

From: Thomas, Kimberly S NWO
Sent: Saturday, May 21, 2011 5:26 PM
To: DLL-CENWO-EOC CMT-ALL
Cc: CENWD-EOC NWD; [REDACTED] WO; [REDACTED] HQ02; [REDACTED] WK
Subject: Flood Update #66 (UNCLASSIFIED)
Attachments: CMDMessagesTalkingPointsFlooding2011rev052011.doc; dailybull 5_21_11.pdf; TempOutlook_21May11.xlsx; 3dayQPF 5_21_11.gif; 2dayQPF 5_21_11.gif; 1dayQPF 5_21_11.gif; 24hr Past Precip 5_21_11.jpg

Classification: UNCLASSIFIED

Caveats: FOUO

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1. Situation:

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Jamestown Reservoir, ND fell 0.13' yesterday to elevation 1449.39 ft-msl. Yesterday's daily inflows were 909 cfs. Releases were 1600 cfs for most of the day, but were cut back to 1400 cfs in the evening in anticipation of heavy rainfall in the area. Releases reaming at 1400 cfs because of the rain in the area, but will be increased as soon on the precipitation passes. 69.9% of the flood pool is occupied. The combined release from both dams is 1,600 cfs.

Fort Peck Dam, MT

Pool Elevation: 2243.02 ft-msl
 24 hr change: 0.12'
 Inflow: 37,000 cfs
 Release: 20,000 cfs

Garrison Dam, ND

Pool Elevation: 1849.59 ft-msl
 24 hr change: 0.01'
 Inflow: 73,000 cfs
 Release: 54,000 cfs

Oahe Dam, SD

Pool Elevation: 1617.14 ft-msl
 24 hr change: 0.19'
 Inflow: 74,000 cfs
 Release: 57,000 cfs

Big Bend Dam, SD

Pool Elevation: 1420.17 ft-msl
 24 hr change: 0.15
 Inflow: 48,000 cfs
 Release: 58,000 cfs

Fort Randall Dam, SD

Pool Elevation: 1354.94 ft-msl
24 hr change: -0.01'
Inflow: 57,000 cfs
Release: 57,500 cfs

Gavin's Point Dam, SD
Pool Elevation: 1205.94 ft-msl
24 hr change: 0.18
Inflow: 57,600 cfs
Release: 57,500 cfs

4.a Emergency Operations:

4.a.1 Nebraska:

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro), are providing technical assistance to the communities of Bridgeport, Lewellen, and North Platte along the North Platte River Basin. The team met with County EM and Sherriff for Lewellen yesterday afternoon. Currently, the community has a road (RD 199A) that goes over the North Platte River. Due to siltation under the bridge and upstream of the bridge, water height differential is about 2-3 feet compacted to the downstream side of the bridge. This is creating backwater that has already crossed over RD 199A. The community met last night to discuss breaching this road to allow more water to travel downstream to Lake McConaughy. The team is now in North Platte and met with officials this morning. This meeting included Jim Hawks (City Admin), Tom Werblow (City Engr), and the Lake McConaughy Engineer. NWO personnel Don Moses and Steve Butler also participated via teleconference. Currently, Lake McConaughy is releasing 3650 cfs with 1750 cfs of that being diverted down the diversion channel prior to North Platte. At midnight tonight, releases will be increased to 4350 cfs with 1750 cfs going down the diversion. Another increase is scheduled for Tuesday. The engineer from Lake McConaughy stated that the reservoir will be considered full at EL 3267. The team is currently touring the community with city officials determining problem areas.

A third flood fight team([REDACTED]) is departing for North Platte on 22 May 2011. The team is working with the city to prepare for the large releases from Kinsley Dam and the North Platte River System. Current probably forecasted releases are 5500 cfs. The City is currently at max channel capacity at 4000 cfs. The City has 75% channel capacity reduction. The FEMA DFIRM 100 year map was mapped for a flow of 12,000 cfs, USACE currently believes that the flooding extent of the 100 year is equivalent to approximately 4380 cfs with the reduced channel capacity. At the 5500 cfs, several areas of critical infrastructure are inundated.

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro) deployed yesterday to provide assistance in communities upstream of Lewellen, which includes Henry, Morill, Mitchell, Scottsbluff, Terrytown, Gering, Minatare, McGrew, and Lisco. On Friday afternoon, they met with city officials from Scottsbluff and Gering. Today, they will finish up in the Scottsbluff area with a meeting with Terrytown officials. Flows currently in the Scottsbluff, Gering, and Terrytown area is what they saw in 2010. Rising water will threaten lift stations, water well fields, and waste water treatment facilities. The team will collect elevation data and compare it to forecasted flows to determine if any protective measures need to be placed. They will also be meeting with city officials from Henry today.

4.a.2 Montana - No Change

4.a.3 North Dakota - No Change

4.a.4 South Dakota:

NWO personnel, [REDACTED] (Geotech) and [REDACTED] (Hydro) have returned to the District Office after providing technical assistance to the City of Bristol. The city is asking for

help in determining what could be done, what needs to be done or steps the city should strive for to decrease or eliminate the possible flooding problems from three sloughs that are now lake size bodies that drain through the storm sewer system in town. A trip report, including recommendations, will be completed this weekend.

4.b Funding:

- * Total Code 200 Funding received to date for this event: \$1,762,425
- * Total Code 200 Funding revoked to date for this event: \$2,600,000
- * Class 219 - Emergency Operations - Direct Assistance - \$250,000 - WAD and FAD received 3/14/2011
- * Class 219 - Emergency Operations - Direct Assistance - \$3.825M - WAD received 03/15/11. FAD received 03/16/11.
- * Class 219 - Additional Funds Request on 24 March - \$231,425 - WAD and FAD received 03/24/11.
- * Class 219 - Emergency Operations - Direct Assistance - \$2.5M revoked - 4/13/11
- * Class 219 - Emergency Operations - Direct Assistance - \$100k revoked - 4/22/11
- * Class 210 - Response Operations - Alabama Tornadoes - \$56k - MIPR - 4/30/11
- * Class 210 - Response Operations - Alabama Tornadoes - \$25k - Request and received for EOC Operations and deployments on 4/30/11

4.c Number of Personnel Supporting EOC Operations: 15

4.d EOC Activation - Level III - Partial Activation(Hours: 0700 to 1700)

ADVANCE MEASURES

1. Situation:

Currently monitoring high snow water equivalents in WY and MT.

2. Advance Measures:

2.a.2 WYOMING - No Change.

2.b Funding:

- * Total Code 500 Funding received to date: \$787,904
- * Class 520 Funding - Advance Measures - Technical assistance - \$100K. WAD and FAD received on 3/2/11.
- * Class 52A Additional Request for Funding - Advance Measures - Technical assistance - \$100K. WAD and FAD received on 3/10/11.
- * Class 520 Additional Request for Funding - Advance Measures - Technical assistance - \$101,640. WAD and FAD received on 3/24/11.
- * Class 519 Funding - Advance Measures - Direct Assistance - \$376,264. WAD and FAD received on 3/28/11.
- * Class 520 Funding - Advance Measures - Technical assistance - \$110k - FAD received on 05/12/11.

2.c Number of Personnel Supporting Advance Measures EOC Operations: 10

3.c EOC Activation - Level III - Partial Activation(Hours: 0700 to 1700)

Kimberly S. Thomas
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
402-995-2448 Office

Runoff Season 2011 Command Messages and Talking Points

Last Update: Friday, July 01, 2011, 11:14 AM
M. Oldham

EM POC: Kim Thomas, CENWO-OD-E PAO POC: Maggie Oldham, CENWO-PA
EM POC ALT: [REDACTED] CENWO-OD-E PAO POC ALT: Monique Farmer, CENWO-PA

ISSUE: Conditions in Wyoming, Montana, North Dakota, South Dakota, Iowa and Nebraska are creating a high potential for flooding across the region within the Missouri River Basin and its tributaries.

BACKGROUND: The Omaha District provides timely and effective technical advice and direct assistance before and during flood events with a goal of reducing flooding risks.

KEY/COMMAND MESSAGES

1. PUBLIC SAFETY

- Public safety is the Corps' highest priority.
- Our emergency response measures are designed to reduce flooding risks.
- We remind the public to remain vigilant of the safety risks associated with flooding events: high water on levees, flooded roads, high flowing streams and environmental issues such as well contamination.

2. TIMELY RESPONSE & PREPAREDNESS

- The Corps has a well-trained team of emergency response personnel, equipment and materials available and ready for mobilization if needed.
- When requested, the Corps provides technical assistance such as ice jam monitoring and scheduling water releases to accommodate snow melt and rain runoff.
- The Corps often provides advanced measures such as sandbags, rapid deployment floodwalls, Hesco bastions and temporary levees, to help reduce flooding risk.

3. ASSISTANCE TO COMMUNITIES AND TRIBAL GOVERNMENTS

- Under the authority of Public Law 84-99 and the Flood Control and Coastal Emergencies appropriations, Corps emergency management personnel collaborate with local, county, state, federal and tribal officials to ensure coordinated efforts in flood risk reduction and emergency response activities.

4. EFFECTIVE COMMUNICATION

- We are using all available communication tools to keep the public informed of our emergency response operations, including:
 - Internet <http://nwo.usace.army.mil/> - click flooding link
 - OmahaUSACE on Facebook and Twitter
 - 24-hour hotline 888-835-5971 ext 2448

Runoff Season 2011 Command Messages and Talking Points

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SPECIFIC NEBRASKA/WYOMING TALKING POINTS

PUBLIC SAFETY

- We are monitoring areas of potential flooding, making recommendations to respond to concerns, recommending locations for temporary levee construction or sandbag efforts, and providing technical assistance.
- Mountain snowpack is 120% of the 30-year peak historical average. The Upper Missouri River snowpack is currently 111%, the Upper Yellowstone is 126%, the Upper North Platte Basin is 145% and the South Platte Basin is 138% of the 30-year peak historical average. Snow Water equivalents at these stations have crested and are receding.
- The Corps' is monitoring the high basin snowpack and is coordinating with appropriate agencies.
- The Corps is monitoring river stages for the North Platte River. A record stage is forecast at North Platte, NE. We are currently evaluating infrastructure that will be affected.
- The Corps regulates Bureau of Reclamation projects Glendo Reservoir, Boysen Reservoir, and Keyhole Dam and Reservoir in Wyoming when the reservoir pool level reaches the flood control zone, which is a portion of a reservoir used to temporarily store floodwaters until they can be evacuated.
- It is important for us to increase releases as soon as possible when the reservoir is in its exclusive flood control zone, an area designated within a reservoir to be used exclusively for storing floodwaters.
- We control water flows by making adjustments to the releases from one dam to the next with consideration given to ground saturation, runoff and flooding potential downstream.
- When we make the decision to adjust releases, we consider downstream conditions and avoid inducing risk to human health, safety and the environment.

Levees

- We conduct regular inspections of federal levees throughout the basin. These levees are maintained and operated by local public sponsors. The Corps is charged with the authority to reduce risks and damages to public infrastructure and in some instances private property reaps the benefits of those measures.
- There is an inherent risk associated with living behind a levee, all stakeholders must be aware of these risks. Mitigating these risks is a shared responsibility.
- The public is reminded to avoid walking or driving in or near flood waters or permanent or temporary levees during periods of high water. The same is true for high or fast flowing streams. These conditions can create additional hazards.

Runoff Season 2011 Command Messages and Talking Points

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M. Oldham

TIMELY RESPONSE TO FLOOD EVENTS/ REDUCING RISK TO TRIBAL, PUBLIC & PRIVATE PROPERTY

Sandbags

- The Corps has more than one million sandbags and a sandbag filling machine in storage at the Omaha/Missouri River Project office as well as pumps and additional materials and equipment available for rapid deployment if needed.
- We also have 300,000 sandbags in western Nebraska as well as 100,000 pre-staged sandbags at Gavins Point Dam (in Yankton, S.D.).
- We currently have 500,000 pre-staged sandbags in Cheyenne, Wyo., so we can quickly and easily deploy them where they may be needed during the runoff season.
- Additional materials and equipment are deployable from other locations if they become necessary.

ASSISTING COMMUNITIES

- When requested, the Corps provides technical expertise for implementing various temporary protective measures to reduce flooding risks. These measures may include modifying water releases from reservoirs, the construction of temporary earthen levees, Hesco Bastions, rapid deployable flood walls or deployment of sandbags. The Corps provides technical direct assistance before and during flood events. This assistance can range from how to place sandbags to helping design a temporary flood control structure.
- We have a well-trained, highly-disciplined and experienced disaster response team that is ready to mobilize and support the mission within hours.
- We establish field offices in high risk areas to position emergency management personnel on the ground for coordinated decisions about moving forward considering current and forecast conditions. Additional measures may become necessary if higher level flood threats are forecast.

NEBRASKA– Advanced Measures Technical Assistance.

- Omaha District personnel deployed May 19 to provide technical assistance to the communities of Bridgeport, Lewellen, and North Platte along the North Platte River Basin. The team completed the inspection of the levee in Bridgeport and presented their findings and recommendations to city officials and the Nebraska Department of Natural Resources May 20.
- A second team deployed May 20 to provide assistance in communities upstream of Lewellen, which includes Henry, Morill, Mitchell, Scottsbluff, Terrytown, Gering, Minatare, McGrew, and Lisco. They met with Scottsbluff officials May 20 to gather contact information for communities within the County.

WYOMING – Advanced Measures Technical Assistance.

- Initial assessments are complete for Casper, Douglas, Elk Mountain, Fort Laramie, Glendo, Glenrock, Laramie, Medicine Bow, Saratoga and Torrington communities.
- Initial assessments for the original requested 23 communities were forwarded by the Corps to the State of Wyoming. The State of Wyoming added an additional location at Ten Sleep for

Runoff Season 2011 Command Messages and Talking Points

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technical assistance. This has been completed. Corps personnel are also working on a technical assistance request from the Wind River Reservation. The 8 initial assessments will be completed May 23.

Temporary Protective Measures

- We work to provide temporary protective measures to communities who have requested it and have met the minimum qualifications. The work is supplemental to all local, County, and State efforts and must protect critical public infrastructure. Our actions are intended to reduce flood risks and damages to public infrastructure, roads, bridges, sewer systems, water and electricity.
- Many of the temporary protective measures to reduce flooding risks take only a few days to construct. Because these measures are temporary and can be constructed so quickly, it is important to determine what locations are at greatest risk of experiencing flooding before taking measures to reduce that risk.
- Temporary levees may cause road closures or reduce public access to public recreation areas. The public is reminded to obey posted signs and not to cross construction fences or barriers.
- All flood fight efforts require a Project Cooperation Agreement signed by the public sponsor who is required to remove all temporary flood fight material 30 days after the flood has receded.
- Temporary levees are designed and positioned to address immediate flood risk concerns. They are not meant to serve as permanent structures.

Contractors

- In anticipation of flood events, our contracting office posts a notice on www.fbo.gov asking for contact information for contractors interested in bidding on temporary levee construction contract opportunities. We also keep a list of companies who responded in prior years and reach out to local officials for the names of contractors in the local area. During site visits we provide the contractor with information about the project and the process for bidding on the contract.
- Contractors are notified when work is available for bidding. All bids are accepted through a sealed bids process. Bids are opened and awarded to the lowest bidder.

EFFECTIVE COMMUNICATION

- We are meeting with State Emergency Management personnel from both Nebraska and Wyoming today to discuss the current situation and forecast.
- Members of the Corps' Emergency Management Team meet with local, county, state, government and Tribal officials to ensure plans are in place to reduce flooding risks and damages to public infrastructure.



US Army Corps
of Engineers
Omaha District

U.S. Army Corps of Engineers, Omaha District

Missouri River Basin

Mainstem and Tributary Reservoir Bulletin

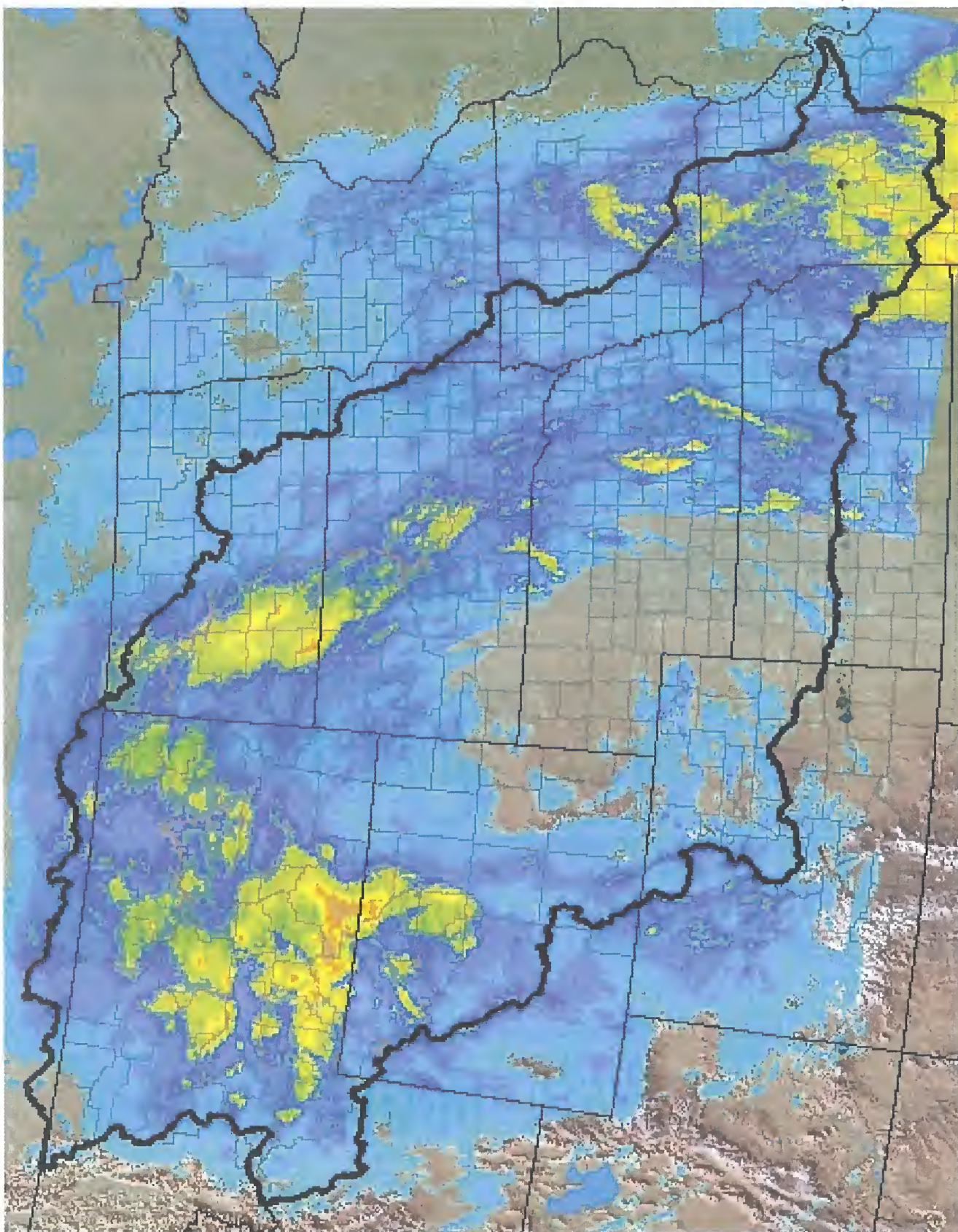
Project Data Date/Time: 05/21/11 12:00 AM

Bulletin Updated: 5/21/11 9:50 AM

Project	Project Information				Current Data					Occupied Storage		
	Elevations (ft msl)		Storage		Elevation (ft msl)	Dly Elev. Change	Storage (ac-ft)	Inflow (dsf)	Release (dsf)	MP (%)	FC (ac-ft)	FC (%)
	MP	FC	MP	FC								
MRR - Missouri River Mainstem Projects												
*Please note Mainstem and USBR data is calculated manually and will populate before 12:00 p.m.												
Fort Peck	2234.0	2250.0	14,995,684	18,687,731	2243.02	0.12	16,790,000	37,000	19,800	100.0	1,794,316	48.6
Garrison	1837.5	1854.0	18,109,625	23,820,730	1849.59	0.01	22,202,000	73,000	53,500	100.0	4,092,375	71.7
Oahe	1607.5	1620.0	18,834,035	23,136,960	1617.14	0.19	22,061,000	74,000	46,800	100.0	3,226,965	75.0
Big Bend	1420.0	1423.0	1,621,484	1,798,614	1420.17	0.15	1,635,000	48,000	40,700	100.0	13,516	7.6
Fort Randall	1350.0	1375.0	3,124,368	5,418,186	1354.94	-0.01	3,526,000	57,000	57,800	100.0	401,632	17.5
Gavins Point	1204.5	1210.0	320,971	469,928	1205.94	0.18	341,000	60,000	57,600	100.0	20,029	13.4
System Totals							66,555,000					
NWO - USBR Section 7 Projects												
Tiber	2993.0	3012.5	925,649	1,328,723	2985.19	0.11	794,349	3,256	2,577	85.8	0	0.0
Clark Canyon	5546.1	5560.4	174,367	253,442	5544.89	0.00	168,107	384	384	96.4	0	0.0
Canyon Ferry	3797.0	3800.0	1,891,888	1,992,977	3778.24	-0.16	1,309,629	12,026	14,255	69.2	0	0.0
Boysen	4725.0	4732.2	741,594	892,226	4709.83	0.11	490,157	3,542	2,641	66.1	0	0.0
Buffalo Bill	5393.5	5393.5	646,565	646,565	5347.05	-0.29	319,934	2,667	3,491	49.5	-	-
Yellowtail	3640.0	3657.0	1,070,000	1,328,000	3606.66	0.11	745,181	8,197	7,894	69.6	0	0.0
Jamestown	1429.8	1454.0	31,510	221,000	1449.39	-0.13	164,044	909	1,549	100.0	132,534	69.9
Heart Butte	2064.4	2094.5	67,000	214,000	2064.24	0.12	66,261	420	223	98.9	0	0.0
Keyhole	4099.3	4111.5	194,000	334,000	4093.92	0.18	142,824	687	0	73.6	0	0.0
Pactola	4580.2	4621.5	56,000	99,000	4580.35	0.16	56,083	205	135	100.0	83	0.2
Shadehill	2271.9	2302.0	120,000	350,000	2271.72	0.02	118,725	477	426	98.9	0	0.0
Glendo	4635.0	4653.0	518,000	790,000	4629.40	0.30	452,424			87.3	0	0.0
NWO - USACE Tributary Projects												
Bowman-Haley	2754.8	2777.0	18,765	91,482	2755.31	0.26	19,662	100	69	100.0	897	1.2
Pipestem	1442.5	1496.3	8,944	142,107	1486.58	0.06	102,224	314	204	100.0	93,280	70.0
Chatfield	5432.0	5500.0	27,428	234,207	5431.81	0.12	27,144	130	0	99.0	0	0.0
Cherry Creek	5550.0	5598.0	12,805	133,134	5550.48	0.28	13,205	140	61	100.0	400	0.3
Bear Creek	5558.0	5635.5	1,882	30,586	5558.51	-0.17	1,936	53	37	100.0	54	0.2
Papio #11	1121.0	1142.0	3,054	16,907	1121.48	0.10	3,242	27	7	100.0	188	1.4
Papio #16	1104.0	1121.0	1,211	4,782	1104.91	0.53	1,326	45	11	100.0	115	3.2
Papio #18	1110.0	1128.2	2,916	10,512	1092.50	0.00	281	2	2	9.6	0	0.0
Papio #20	1095.8	1113.1	2,536	8,611	1096.37	0.21	2,642	22	5	100.0	106	1.7
Cottonwood	3875.0	3936.0	655	8,385	3856.52	0.00	0	0	0	0.0	0	0.0
Cold Brook	3585.0	3651.4	520	7,200	3582.48	0.12	431	4	0	82.9	0	0.0
Lake Audubon	1847.0	1847.0	323,690	323,690	1846.81	0	INFLOW AND OUTFLOW NOT CALCULATED					
Lake Pocasse	1617.0	1617.0	11,000	11,000	POOL ELEVATION READ MONTHLY BY PROJECT OFFICE							
Salt Creek #02	1335.0	1350.0	1,100	4,957	1333.55	0.83	879	58	0	79.9	0	0.0
Salt Creek #04	1307.4	1322.5	2,531	9,660	1306.90	1.1	2,377	164	0	93.9	0	0.0
Salt Creek #08	1287.8	1302.0	1,780	8,375	1289.30	1.4	2,213	228	27	100.0	433	6.6
Salt Creek #09	1271.1	1285.0	1,451	5,864	1271.68	0.48	1,565	52	5	100.0	114	2.6
Salt Creek #10	1244.9	1262.0	1,629	7,468	1245.82	1.1	1,829	126	7	100.0	200	3.4
Salt Creek #12	1232.9	1252.0	1,808	9,415	1234.10	0.89	2,074	118	18	100.0	266	3.5
Salt Creek #13	1341.0	1355.0	2,161	7,182	1342.61	1.3	2,559	206	47	100.0	398	7.9
Salt Creek #14	1244.3	1263.5	7,500	27,597	1245.51	0.81	8,401	368	60	100.0	901	4.5
Salt Creek #17	1242.4	1266.0	783	6,628	1243.32	0.68	925	56	12	100.0	142	2.4
Salt Creek #18	1284.0	1311.0	25,088	96,759	1285.43	0.75	27,794	834	110	100.0	2,706	3.8

6 Day Forecast Temperatures (High/Low)

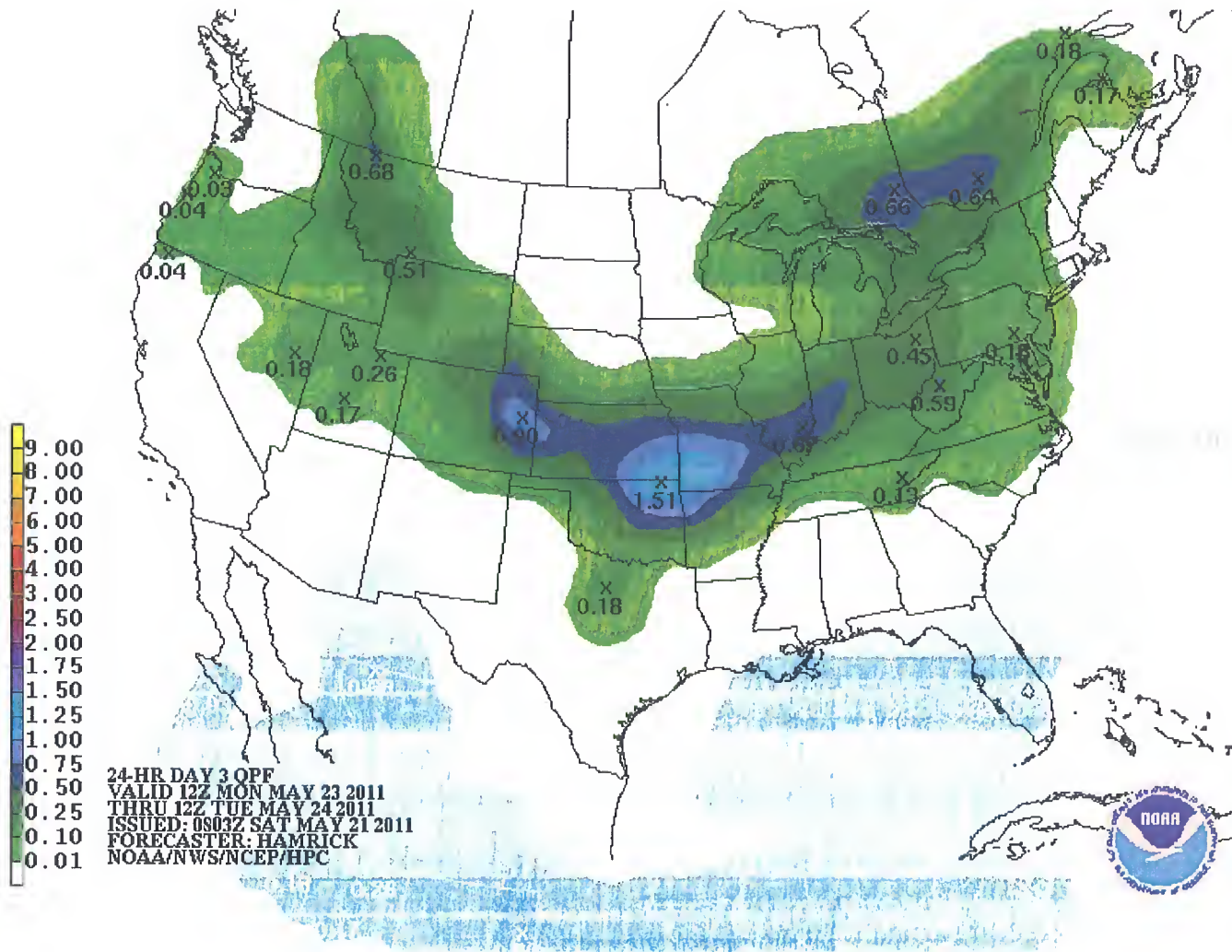
Location	Sat 21-May	Sun 22-May	Mon 23-May	Tues 24-May	Wed 25-May	Thu 26-May	Fri 27-May
Billings, MT	59/47	64/46	57/42	55/42	61/43	63/44	63/NA
Cody, WY	57/43	63/44	57/44	55/42	63/43	65/42	61/NA
Sheridan, WY	56/45	60/44	57/42	54/39	58/41	62/43	61/NA
Saratoga, WY	57/36	66/39	63/39	60/39	58/37	66/39	68/NA
Casper, WY	58/43	64/43	61/43	58/41	64/42	69/41	63/NA

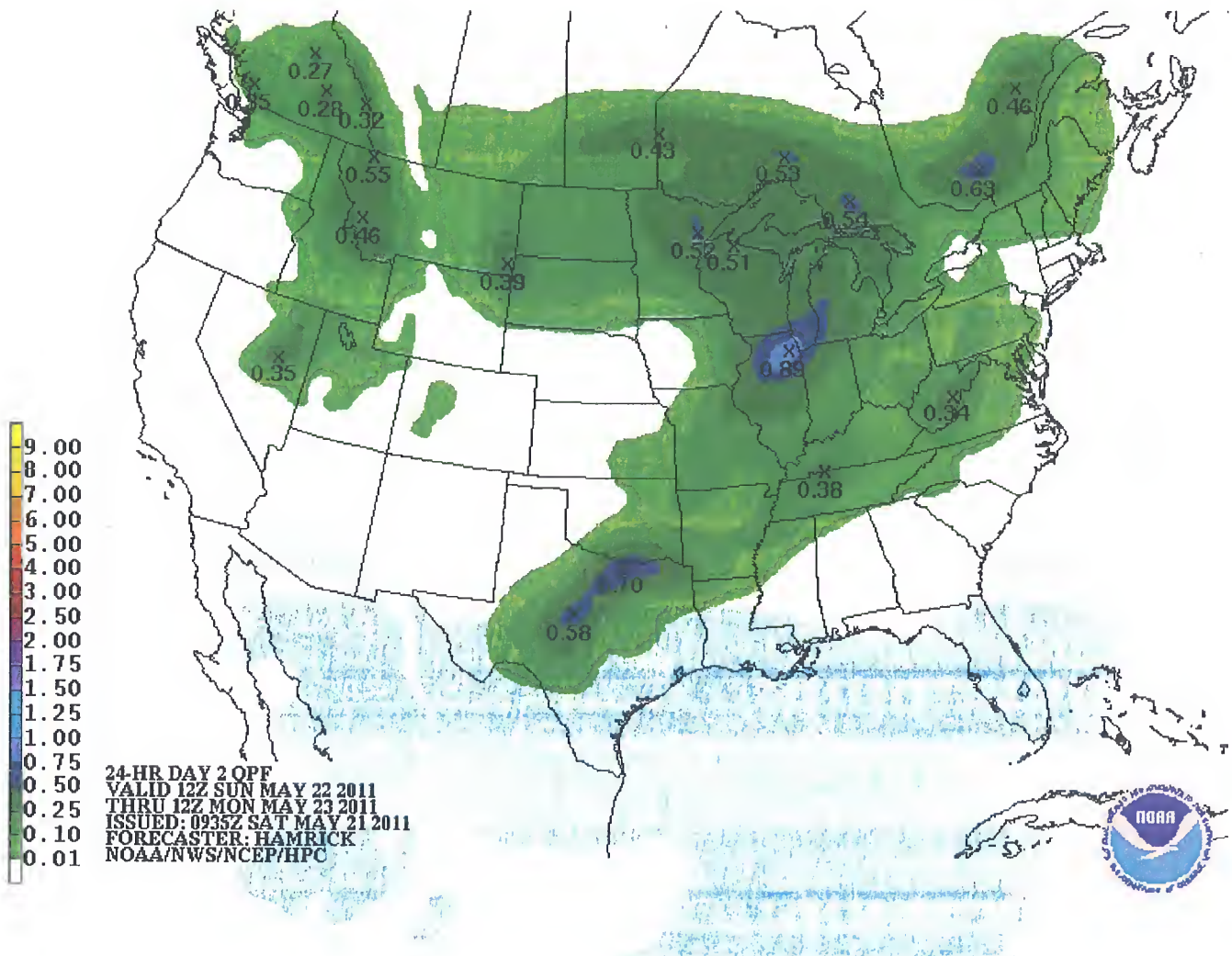


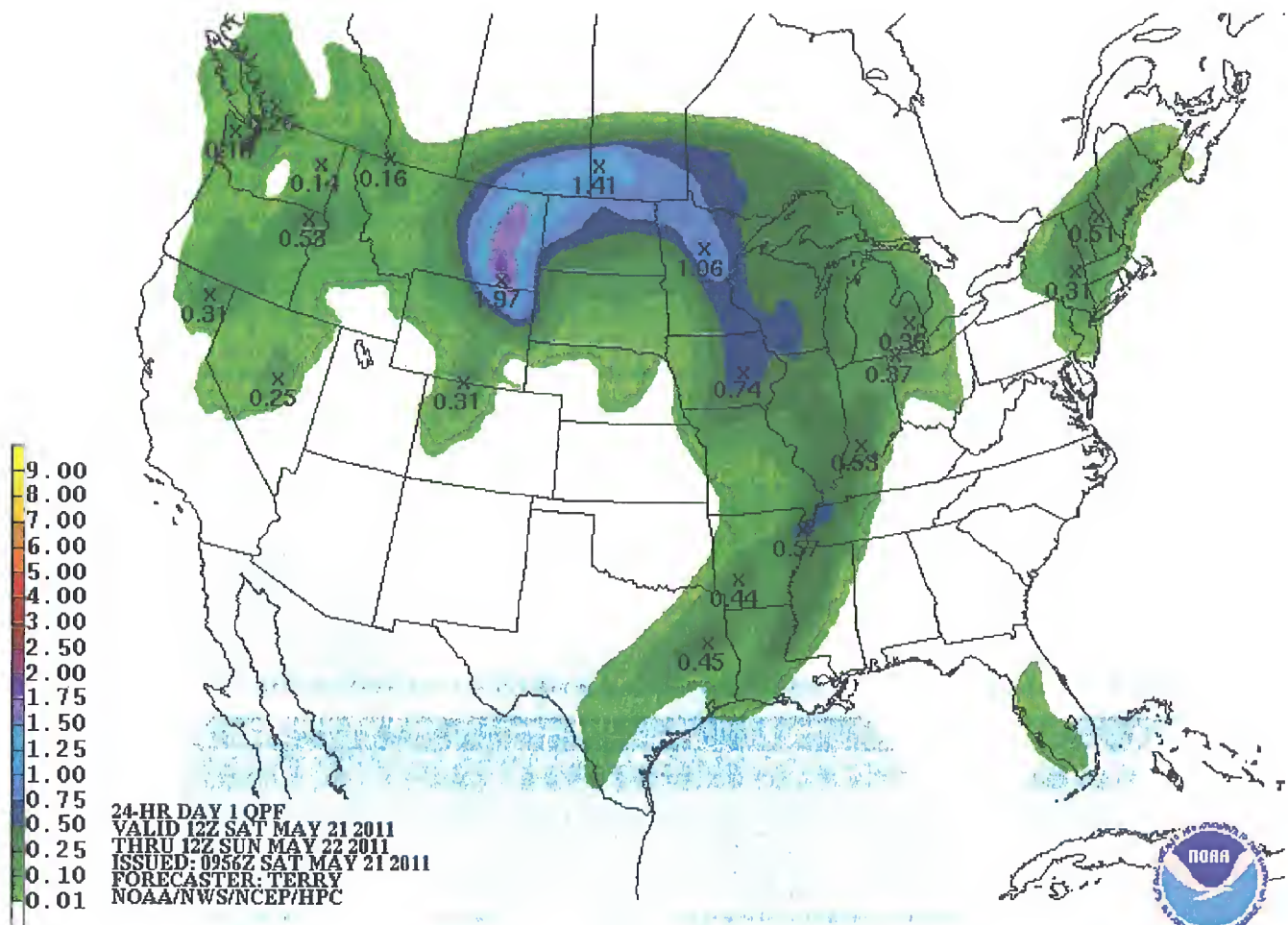
MBRFC 24-Hour Gage Biased Estimated Rainfall (inches)

Ending: 5/21/2011 at 7:00AM CDT

Created: 5/21/2011 at 8:32 AM CDT







[REDACTED] NWO

From: [REDACTED] NWD
Sent: Saturday, May 21, 2011 2:40 PM
To: [REDACTED] NWD; [REDACTED] NWK; [REDACTED] NWK; [REDACTED]
[REDACTED] NWK; [REDACTED] NWD; [REDACTED] NWK; [REDACTED]
NWK; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] K; [REDACTED] A
NWK; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] F NWK; [REDACTED]
[REDACTED] NWK; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02;
Farhat, Jody S NWD02; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED]
[REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED]
[REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Cc: [REDACTED] NWK; [REDACTED] NWK
Subject: FW: NBC Action News Clip (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

fyi

From: Lucy Fletcher [<mailto:Lucy@agriservices.com>]
Sent: Thursday, May 19, 2011 9:23 AM
To: Bill Jackson; Doug Bonderer; Jerry Young; Joanie Neville; Kevin Holcer; Luann Steiman;
Pat Lock; Roseanne Meyer; Valerie Gladbach; Bill Brown; Branden Criman;
Brian.Weiler@modot.mo.gov; Charlie Smith; Chris Gutierrez; Darla Arni;
davedewey.rme@gmail.com; Dave Heyl; Ransom, Donald; Ernest.Perry@modot.mo.gov; [REDACTED]
[REDACTED] NWD; kfarmer@farmercompanies.com; mark.russell@ded.mo.gov; Mary Lynn m/v;
mcollins@kcportauthority.com; Michael McQuillan; nj1@sbcglobal.net; Ray Bohlken;
Sherrie.Turley@modot.mo.gov; sbohlken@capitalsandcompany.com
Cc: hnspercer@waterwaysjournal.net
Subject: NBC Action News Clip

NBC Action News did a great little piece for last nights news that was filmed yesterday aboard the M/V Mary Lynn. Marc Davis and Dave Dewey were awesome spokesmen for the industry.

I have copied the Waterways Journal in this email. One of the shots of the Captains chair showed the journal sticking out of the back pocket.

http://www.nbcactionnews.com/dpp/money/business_news/river-could-be-due-for-a-flood-of-economic-development

Lucy Fletcher

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<http://www.agriservices.com> <blocked::http://www.agriservices.com>

Lucy@agriservices.com

Classification: UNCLASSIFIED

Caveats: NONE

NWO

From: Farmer, Monique L NWO
Sent: Saturday, May 21, 2011 1:55 PM
To: Farhat, Jody S NWD02
Subject: Fw: Corps plans further release increases out of Garrison Reservoir

From: bobmerc1@aol.com <bobmerc1@aol.com>
To: Farmer, Monique L NWO
Sent: Fri May 20 17:11:41 2011
Subject: Re: Corps plans further release increases out of Garrison Reservoir

Hi Monique,

What does this mean for levels and releases at the four downstream dams in South Dakota and for the river below Gavins Point and for the Mississippi River?

-----Original Message-----

From: U.S. Army Corps of Engineers, Northwestern Division <monique.l.farmer@usace.army.mil>
To: bobmerc1@aol.com
Sent: Fri, May 20, 2011 3:51 pm
Subject: Corps plans further release increases out of Garrison Reservoir

<http://us.vocuspr.com/Publish/520028/vcsPRAsset_520028_348656_c5220867-6ce9-45c0-83c2-dfd9e54e58a1_0_USACE_LOGO_small.jpg>
BUILDING STRONG®
NEWS RELEASE

For Immediate Release: May 20, 2011
Contact: Monique Farmer - (402) 995-2420 monique.l.farmer@usace.army.mil

Jody Farhat - (402) 996-3840
[REDACTED] - ([REDACTED])

Omaha, Neb. - The U.S. Army Corps of Engineers Water Management Division announced today that it plans to increase the releases out of Garrison Reservoir above levels previously planned.

"Inflows into the reservoir continue to exceed expected levels due to the much above normal precipitation over the past two weeks," said Jody Farhat, Chief of the Water Management Division here. "The reservoir has risen more than two feet since early May and is currently only 0.4 feet below the base of the exclusive flood control zone." The exclusive flood control zone, which extends from elevation 1850 feet to the top of the spillway gates at elevation 1854 feet, is maintained exclusively for flood control. Water is released from this zone as quickly as downstream channel conditions permit so that sufficient storage remains available for capturing future inflows.

In addition to the much above normal rainfall during May, mountain snowpack melt off is behind schedule due to unseasonably cold temperatures. "In years when the melt is delayed, we typically see increased runoff volumes from the mountain snowpack," said Farhat. "That's

because when it finally does come off, it melts quicker without the typical freeze-thaw pattern which allows more to soak in the ground.”

Normally, the mountain snowpack peaks in mid-April, however this year it continued to accumulate into early May. The snowpack peaked at 141 percent of normal in the reach above Fort Peck and 136 percent of normal in the reach between Fort Peck and Garrison. The current release from Garrison is 54,000 cfs. It is scheduled to be increased to 56,000 cfs on Sunday and then held at that rate until Thursday to provide time for land owners to take appropriate measures to protect their property. Additional release increases to 58,000 cfs are scheduled to take place Thursday, May 26 and again on Saturday, May 28 when increases are set to go to 60,000 cfs. Additional increases may be necessary in early June if conditions continue to deteriorate.

“We recommend that folks prepare for an additional two-foot increase in river levels to accommodate the higher releases and provide some ability to withstand the impacts of typical summer thunderstorms which are sure to occur in the coming months,” said Farhat. The increased releases will be necessary through the summer and into the fall to evacuate the near record runoff. Much above normal releases are being experienced at the Corps’ other five reservoirs on the main stem of the Missouri River.

With all the generating units available, the release capacity of the powerplant is 41,000 cfs. Currently, on-going maintenance efforts are limiting the releases to 30,000 cfs through the power plant. The regulatory tunnels will be used for releases above powerplant capacity. Due to the need to release water through the regulatory tunnels, access to the wing walls will be closed for public safety.

During any flood response activities throughout the basin, the Corps will provide regular updates directly to the public via its Facebook (www.facebook.com/OmahaUSACE <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484425x-911671>>) and Twitter accounts (www.twitter.com/OmahaUSACE <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484424x-428728>>).

View daily and forecasted reservoir and river information on the Water Management section of the Northwestern Division homepage at: <http://www.nwd-mr.usace.army.mil/rcc> <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484427x-873108>> .

Other links of interest:

- <http://www.nwo.usace.army.mil/html/op-e/flood.html> <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484426x-390162>>
 - www.facebook.com/OmahaUSACE <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484425x-911671>>
 - www.twitter.com/OmahaUSACE <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484424x-428728>>
 - www.youtube.com/OmahaUSACE <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484423x-950238>>
 - www.mraps.org <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484422x-467298>>
 - www.moriverrecovery.org <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484421x-988809>>
- ###

U.S. ARMY CORPS OF ENGINEERS - NORTHWESTERN DIVISION

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<http://www.nwo.usace.army.mil/> <<http://USACEARMY.pr-optout.com/Url.aspx?520028x484420x-505872>>

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If you would rather not receive future communications from U.S. Army Corps of Engineers, Northwestern Division, let us know by clicking here. <<http://USACEARMY.pr-optout.com/OptOut.aspx?520028x24691x315829x1x3604806x24000x6&Email=bobmercercer1%40aol.com>>
U.S. Army Corps of Engineers, Northwestern Division, 1616 Capitol Ave., Ste. 9000, Omaha, NE 68102 United States

NWO

From: [REDACTED] LRDOR
Sent: Saturday, May 21, 2011 1:27 PM
To: [REDACTED] E LRDOR; DLL-CELRD-WM Lower Ohio-Miss Coordination;
[REDACTED]@noaa.gov'; [REDACTED]@noaa.gov'; [REDACTED] SWD;
[REDACTED]@noaa.gov'; [REDACTED]@noaa.gov'; [REDACTED]@noaa.gov'
Subject: NOTES: Lower Ohio / Mississippi Coordination Call - 21 May 2011, 1400 ET / 1300 CT
(UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Agencies Represented:
National Weather Service:
Hydrometeorological Prediction Center (HPC)
Lower Mississippi RFC (LMRFC)
Arkansas Basin RFC (ABRFC)

US Army Corps of Engineers:
Great Lakes & Ohio River Division (LRD - Cincinnati)
Mississippi Valley Division (MVD)
Southwestern Division (SWD)
New Orleans District (MVN)

HPC

An upper low currently over the north central US is producing heavy rain; as it lifts to the northeast it will set up a stationary frontal boundary Tuesday through Friday with the potential for heavy rain of 3-5 inches across the Upper Mississippi, central Illinois, central Indiana and westcentral Ohio. This will be a convective system, so it is difficult to predict actual locations and amounts. Locally higher amounts will be possible.

As the system moves out of the Ohio basin, it may bring heavy rain to the northeastern portion of the basin.

ABRFC

The Arkansas River at Pine Bluff is at 60 kcfs. Rainfall of 2-5 inches in west and central Arkansas will increase flows with a potential crest of 130 kcfs in 2-3 days.

LMRFC

The river has crested at Red River Landing and Natchez with a very slow gradual fall. There is no change in the forecast from Baton Rouge to New Orleans. Positive flow is now coming from the tributaries. 5 Day QPF runs show additional water coming out of the Upper Mississippi but this will only slow down the recession at Cairo.

MVN

Flows are steady throughout the lower system and are expected to remain so over the next 2-3 days. No additional gate changes are expected. Diversions today: 662 kcfs at Old River Diversion; 316 kcfs at Bonnet Carre; 114 kcfs at Morganza.

MVD

No comments.

SWD

1 to 2 1/2 inches of rain fell in the White River system; the lakes are holding this rain, refilling previously emptied storage. The reservoirs will hold until after the crest.

LRD

Steadily falling conditions in the lower Ohio basin. Kentucky and Barkley steady as we approach guide curve elevation 359.0. Kentucky and Barkley to average 60 and 50 kcfs, respectively over the next 4 days. Kentucky is at 360.4 today. We will add OHRFC back into the call for tomorrow due to the heavy forecast rain in the west central portion of the basin.

Next Call

Sunday May 22, 2011 at 2:00pm Eastern / 1:00pm Central.

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Saturday, May 21, 2011 1:14 PM
To: [REDACTED] NWO; Farhat, Jody S NWD02
Subject: River Photos (UNCLASSIFIED)
Attachments: Riverwood Drive 5-20.jpg; Fox Island Boat Ramp1 5-20.jpg; Fox Island Boat Ramp 2 5-20.jpg; Ground water 5-20.jpg; Ground water in yards 5-20.jpg; Homeowner levee Larson Road 5-20.jpg; Homeowner Protection Langer Lane 5-20.jpg; Lewis & Clark Riverboat 5-20.jpg; Looking North from Fox Island Boat Ramp 5-20.jpg; Oxbow wate elevation 5-20.jpg

Classification: UNCLASSIFIED

Caveats: FOUO

FYI,
I've attached photos from the Bismarck area. They were taken late in the afternoon on Friday, May 20th, so the Garrison releases at the Bismarck gage would have been about 52,000 cfs.

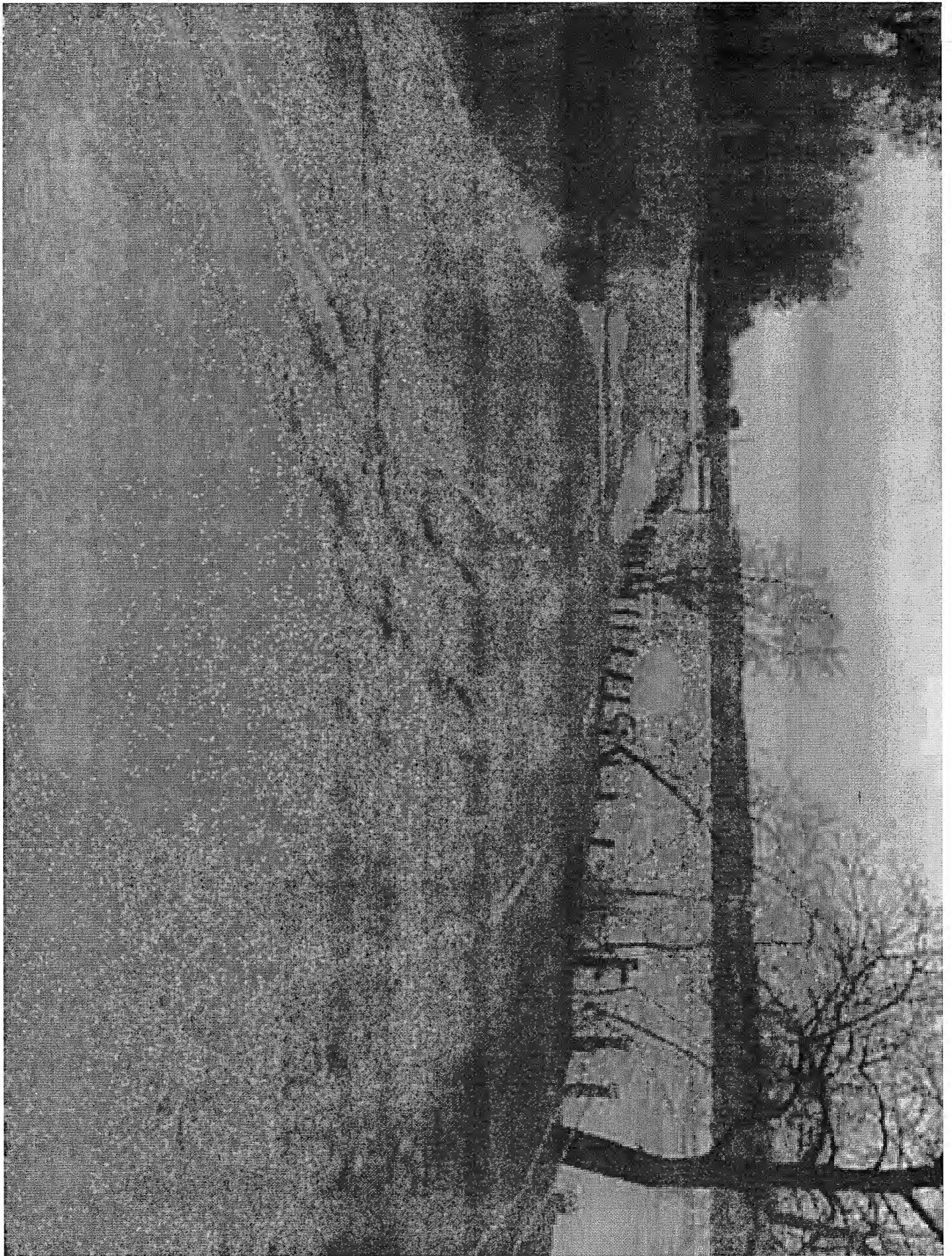
Riverwood Drive is the north access to the Fox Island area. I'd estimate that an 18 inch rise in stage will put water up on this road. The south access also has a low area, but I know the City is looking at that as well.

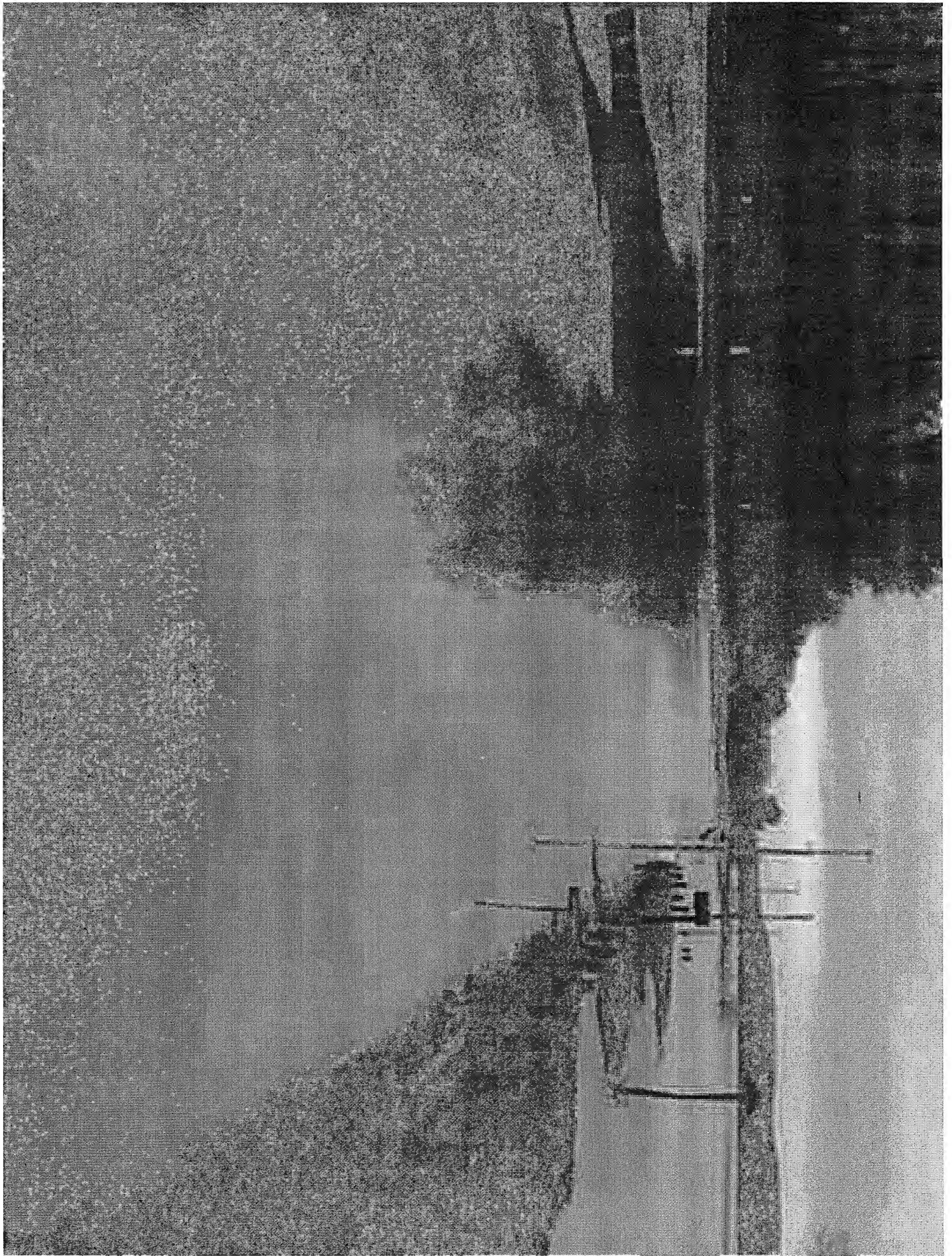
Todd J. Lindquist, P.E.
Operations Project Manager
Garrison Project

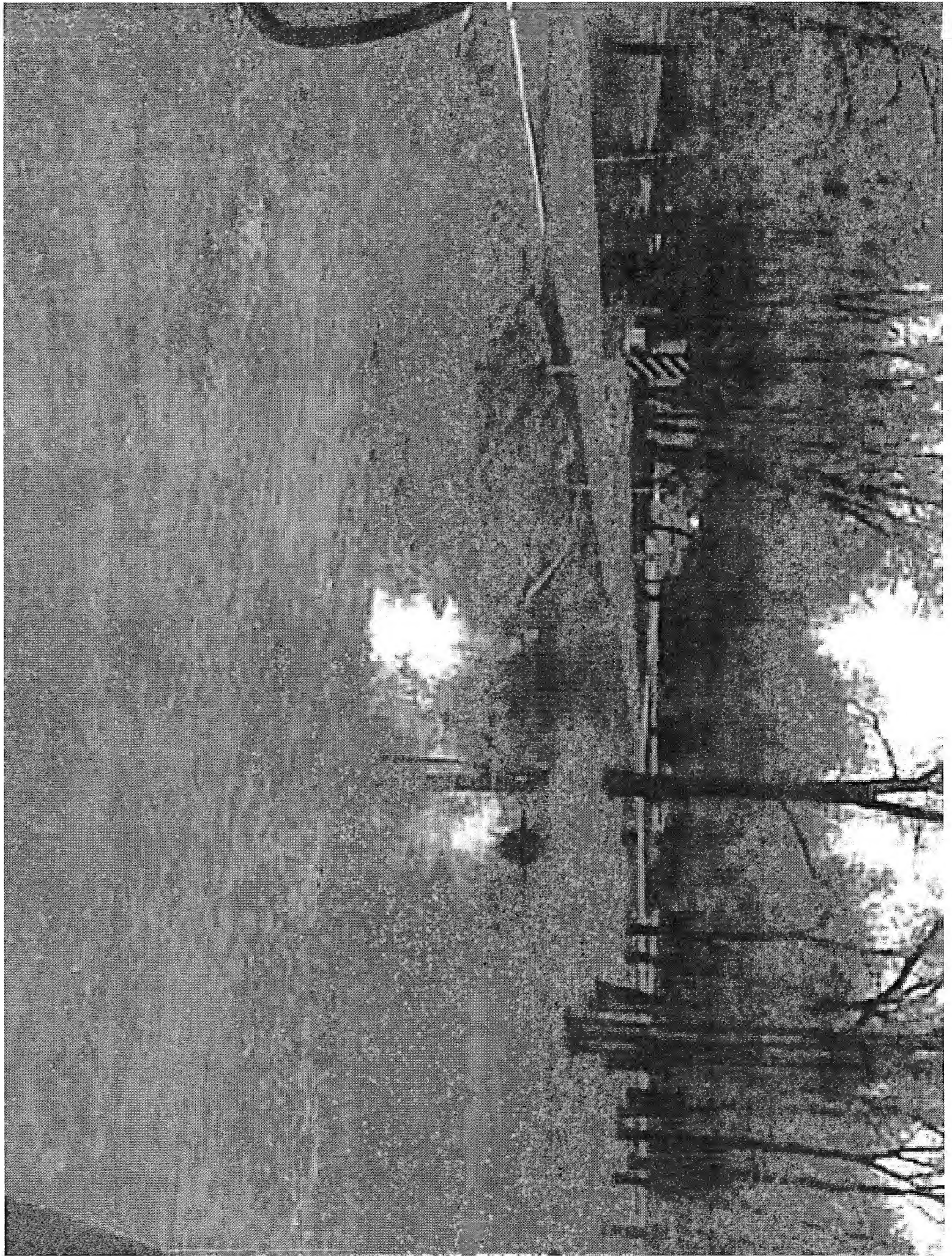
Classification: UNCLASSIFIED

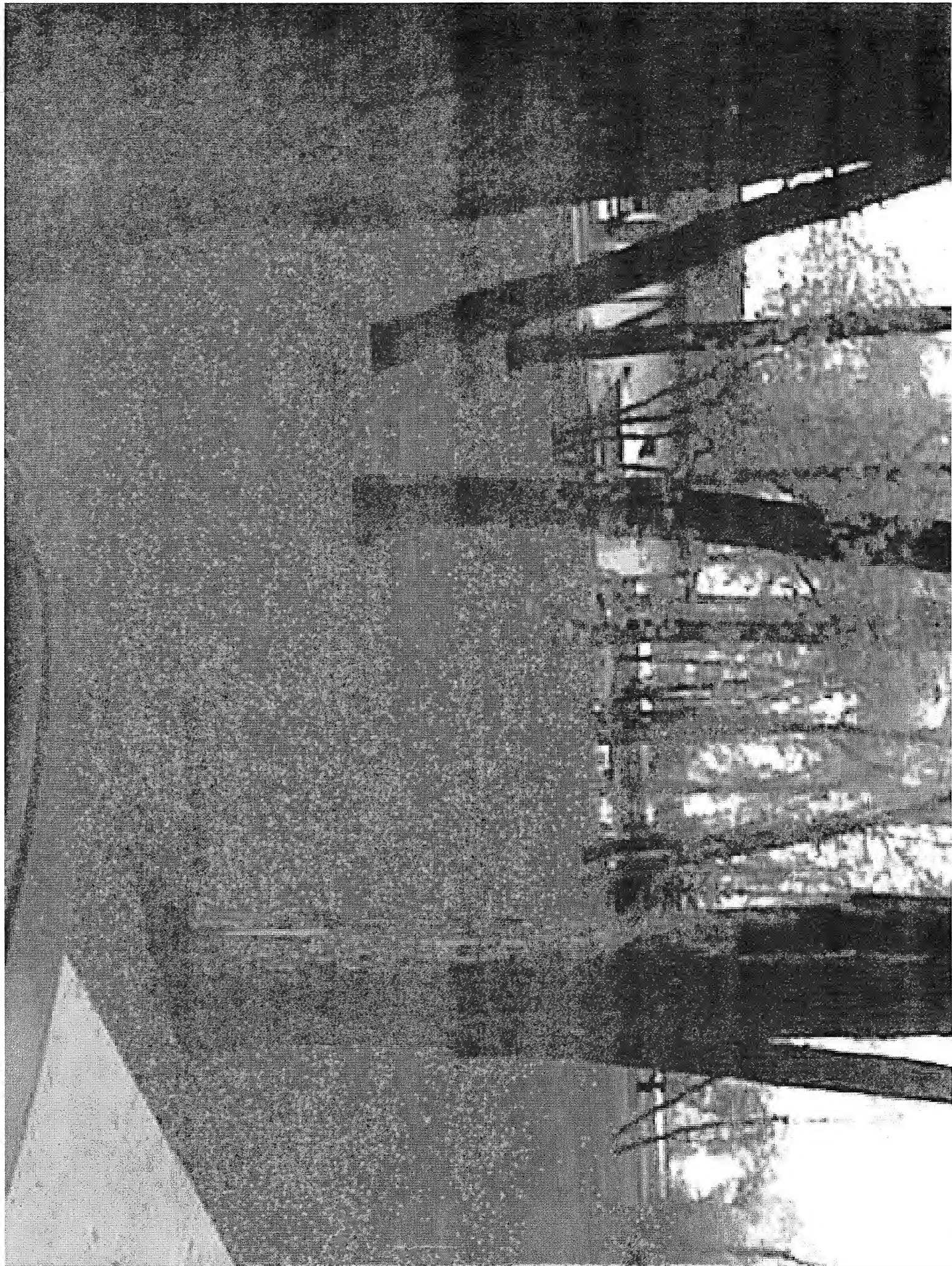
Caveats: FOUO



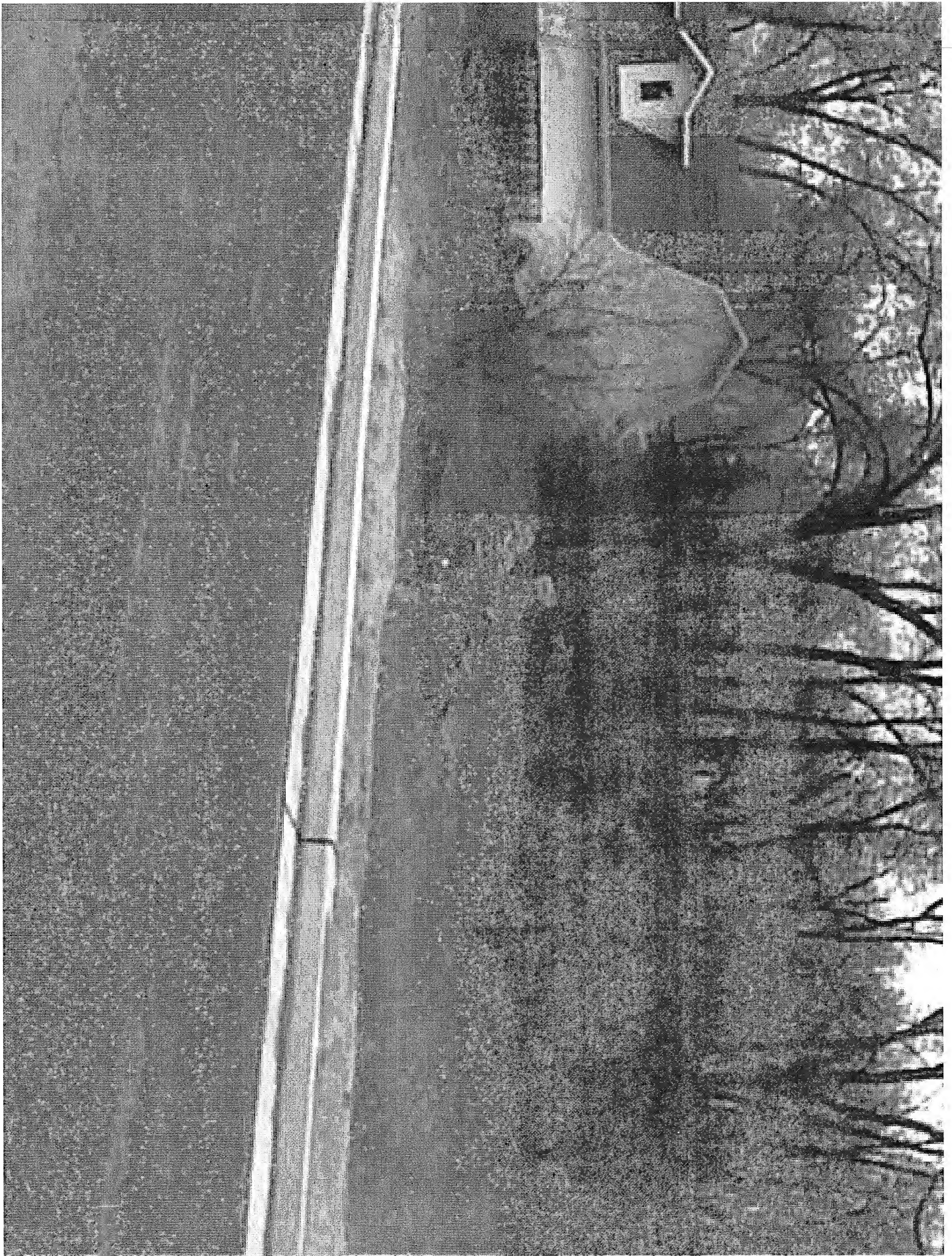






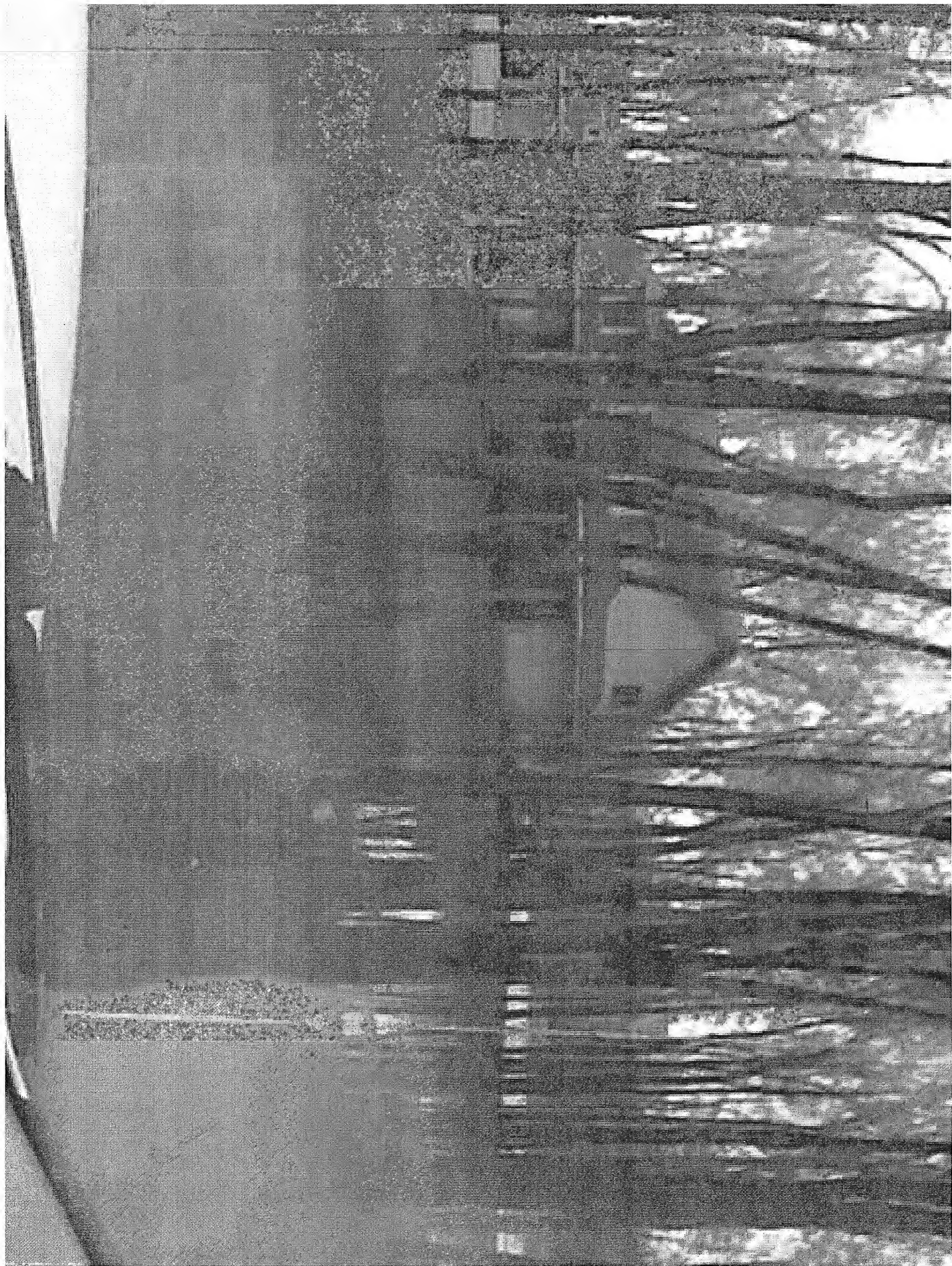












[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Saturday, May 21, 2011 11:18 AM
To: Farhat, Jody S NWD02
Subject: Knife river forecast

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: [REDACTED] NWD02
To: [REDACTED] A NWD02; [REDACTED] NWD02
Sent: Sat May 21 09:02:13 2011
Subject: FW: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

FYI - the NWS in Bismarck is forecasting a peak discharge from the Knife River at Hazen of about 11,000 cfs on May 24 due to some heavy rain (1.5-3 inches) that occurred upstream of Beulah over the past 24 hours. According to the Bismarck rating curve, a discharge of 67 kcfs (11 kcfs + 56 kcfs) results in a stage of about 15.4 ft. At this time the discharge is only about 500 cfs and it is slowly beginning to rise.

[REDACTED]

-----Original Message-----

From: [REDACTED] NWD02
Sent: Friday, May 20, 2011 10:25 AM
To: Farhat, Jody S NWD02; Lindquist, Todd J NWO
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWD02
Subject: Missouri River at Bismarck - Flows and rating curve (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

All,

I spoke with the Brad Sether of the ND USGS to verify their rating curve. We (Corps and USGS) are both showing a flow at Bismarck of about 50,000 cfs and a stage of 13.4 feet. The USGS measured the Missouri River at Bismarck twice yesterday and noted a significant negative shift (-1.30'). They believe their rating curve to be accurate. This compares to last fall's shift, which Brad feels is a more normal shift, of -0.30'. What that means is that the channel is (currently) less efficient than it was this fall/winter, likely due to backwater effects from Oahe pool levels. Unknown as to when the channel will return back to more normal conditions. The USGS plans to measure at Bismarck every other week, which is twice their norm.

Currently, not much is contributing from the tributaries between Garrison and Bismarck, so the release from Garrison is pretty much what we see at Bismarck (3 days, or so, later).

Current Bismarck rating (remember, this changes based on changing channel conditions):

13.0' = 47.6 kcfs
13.5' = 51.1 kcfs
14.0' = 55.1 kcfs
14.5' = 59.3 kcfs
15.0' = 63.7 kcfs

- [REDACTED]

[REDACTED] P.E.
Reservoir Regulation Team Lead
Missouri River Basin Water Management,
Northwestern Division, USACE
[REDACTED]
[REDACTED] (x)

-----Original Message-----

From: Farhat, Jody S NWD02

Sent: Friday, May 20, 2011 9:08 AM

To: [REDACTED] NWO

Cc: [REDACTED] A NWD02; [REDACTED] D NWD02; [REDACTED] NWD02; [REDACTED]
NWD02

Subject: Call with Sando (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] called and we agreed to go to 56 on Sunday (instead of the 55 that we had planned) then hold for a few days to allow folks time to take precautionary measure, especially in the Southport and Fox Island areas. The plan is to have the next increase to 58 kcfs at 8 a.m. on Thursday, May 26 and 60 kcfs on Saturday, May 28. The following week we will be updating our monthly studies which will be released on June 2. It is not outside the realm of possibility that they will show the need to continue increasing releases.

Jody

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Saturday, May 21, 2011 9:49 AM
To: [REDACTED] NWD02
Cc: Farhat, Jody S NWD02
Subject: RE: RCC Report (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Thanks Mike!

-----Original Message-----

From: [REDACTED] NWD02
Sent: Saturday, May 21, 2011 9:29 AM
To: [REDACTED] NWO
Subject: Re: RCC Report (UNCLASSIFIED)

Todd,
The link is correct. There appears to be an issue with files going to the internal web server. The external site is up to date. The link is similar but starts <http://www>.
[REDACTED]

Message sent via my BlackBerry Wireless Device

----- Original Message -----

From: [REDACTED] NWO
To: [REDACTED] NWD02
Sent: Sat May 21 06:11:15 2011
Subject: RCC Report (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
The following link brings me to a May 16th report. Should I be using another link to get to the current data?
<https://w3.nwd-mr.usace.army.mil/rcc/reports/showrep.cgi?3MRDTAP7>

[REDACTED]
Operations Project Manager
Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

NWO

From: [REDACTED] NWO
Sent: Saturday, May 21, 2011 8:51 AM
To: Farhat, Jody S NWD02
Subject: RE: Reports on Internet (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
The following link takes me to a May 16 report, even after "refresh".
<https://w3.nwd-mr.usace.army.mil/rcc/reports/showrep.cgi?3MRDTAP7>

Also, Mike Gunsch sent [REDACTED] a message this morning about a link that took him to a three week forecast from 2007?
Todd

-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Saturday, May 21, 2011 8:42 AM
To: Lindquist, Todd J NWO
Subject: Re: Reports on Internet (UNCLASSIFIED)

Todd - first remind folks to hit their update button since if they haven't shut their computer down the old report may be in their cache. Then if it's still out of date let us know which report they are looking at. I quickly stepped through many of our bulletins on our website and all had the correct date, but some of the data is missing since it's still early in the day.

We want to keep things current so if there's bad info our there please let us know.

Jody

----- Original Message -----
From: [REDACTED] NWO
To: Farhat, Jody S NWD02
Sent: Sat May 21 06:15:10 2011
Subject: Reports on Internet (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
I realize that you guys are extremely busy, but I'm receiving feedback from my staff, as well as stakeholders, that several reports are not current, or seem to have incorrect information. I'm not sure if your staff is just behind on posting updates, or if some of the links take folks to old information?

Either way, given the current conditions people are actively engaged in utilizing information that is posted. If we could scrub the websites and keep them current I think it would help keep stakeholders informed.

[REDACTED]
Operations Project Manager
Garrison Project

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Saturday, May 21, 2011 8:15 AM
To: Farhat, Jody S NWD02
Subject: Reports on Internet (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Jody,
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[REDACTED]
Operations Project Manager
Garrison Project

Classification: UNCLASSIFIED
Caveats: FOUO